The DRUG and COSMETIC INDUSTRY

MARCH 1937

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FRONT COVER

Ancient Ethiopia supplies civet to all the world. One of the most precious and mysterious substances used by the perfumer, it was not until a hundred years ago that its real origin was known. In the market place in the city of Addis Ababa, merchants carefully weigh out the prized civet much as the money changers of old conducted their trade on the steps of the temple.

The Drug and Cosmetic Industry is published monthly by Drug Markets, Inc., Frazer V. Sinclair, President and Treasurer; Thomas R. Farrell, Vice-president and Secretary. Publication Address, 28 Renne Ave., Pittsfield, Mass. Editorial and General Office, 101 West 31st St., New York, N. Y.

Subscription price—$2.00 a year, in advance, Foreign Countries, $3.00. Single copies, 25c; Back issues 50c. Entered as Second Class Matter, January 1, 1928, at the Post Office at Pittsfield, Mass., under the Act of March 3, 1879.

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Printed by Sun Printing Co., Pittsfield, Mass.

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MANUFACTURERS' NIGHTMARE

MANUFACTURERS must insist that retailers recognize such factors as rapidity of turnover, price levels of competitive products, profit margins of manufacturers, ease of selling, and other factors which are all-important in arriving at what percentage of profit should be fixed as a minimum for retailers. For having tasted blood through enactment of the Robinson-Patman Law and many fair trade acts, the retailers of this country are champing at the bit eager to show manufacturers what they are going to demand and get. With many more fair trade acts just around the corner, retailers are organizing to force manufacturers to fix their minimum prices so that the percentage of profits for retailers will be greater than it has been heretofore.

THE real danger in the situation is that retail organizations in various parts of the country might fall into the hands of those who obtain their control by promising the members a percentage of profit which can not be soundly granted. Manufacturers are apt to be subject to the demands of wild-eyed organizers who will work retailers into such a frenzy that they will not listen to reason.

MANUFACTURERS will soon be faced with a series of conferences with leaders of these retailers' organizations which represent important blocs of the trade throughout the country. For it seems very definitely as though the system of collective bargaining is going to be applied to the problem of fixing minimum prices and percentages of profits for retailers under state fair trade acts.

MANUFACTURERS will have to deal in this way with retailers if they want to keep broad and active distribution of their products. And retailers must be brought to evaluate the products of manufacturers by more than the single yardstick of which product yields the largest percentage of profit. For if retailers cannot be convinced of the soundness of evaluating products upon the many limiting factors, but instead try to force the consumer or manufacturer to foot the bill alike on all products, it might easily prove the undoing of the retailers' cause.

NEW and NON-OFFICIAL

WE PLAINLY STATED SOME MONTHS AGO that the inside information regarding the proposed Food, Drug and Cosmetic Act was that no bill could be enacted which bore the name of Senator Copeland. This was because of the fact that the Senator was not in sympathy with the New Deal and did nothing to aid in the reelection of President Roosevelt. Only recently the Senator opposed the President's Supreme Court plan. Some wiseheads in the industry obtained this information so straight and so definitely that they firmly believed that they were merely wasting their time in going through the motions of working with the Senator in drafting a new bill.

Others in the industry, who have been most enthusiastic to get the matter settled and a new bill passed, refused to believe that a bill bearing Senator Copeland's name could not be enacted.

But now the President himself has openly criticized the pending Copeland Bill and it would seem that the information was right after all. The President has gone so far as to state that his impression is that the Copeland Bill weakens rather than strengthens the existing law.

However, the Senator rose to the occasion and held up consideration of the bill by the Senate until it can be amended more in accord with the views of the President. So it's not going to be so easy to down the Senator and his bill.

The strategy by the Administration probably will be that the House will pass a bill meeting the approval of the President, and then this bill will be substituted for the Copeland Bill under the same number S 5. This bill will then be returned to the Senate and because of the fact that it takes the original number S 5, it will not again come before Senator Copeland's Commerce Committee. Instead it will go before a conference committee which will be appointed by the Speaker of the House and the Vice-president. In this way a bill written by the Administration, without regard for Senator Copeland, could be enacted if the Senate could be kept in line. While this might not take the name of Senator Copeland off the bill due to the fact that his number, S 5, was used, it would be claimed that the Senator had nothing to do with the authorship of the bill and that the Administration itself is really responsible for fully protecting the public. It would doubtless be claimed that the Administration had to take this step to stop the Senator from weakening existing law instead of strengthening it.

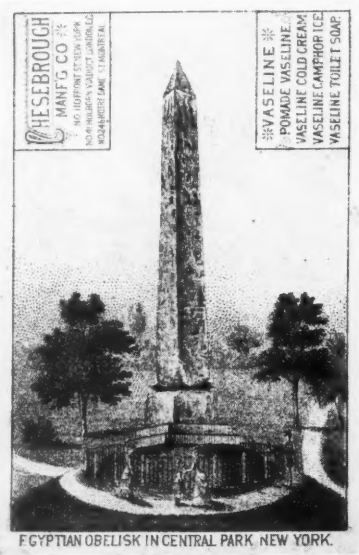
THE LONG HERALDED PATMAN BILL which was to eliminate retailing manufacturers has finally been introduced in Congress, but it fails to excite us. The reason for this lack of excitement is that the bill merely prohibits retailing by manufacturers when the effect of this retailing "may be substantially to lessen competition between such manufacturer and his customers, or tend to create a monopoly in such line of commerce, or to injure, destroy or prevent competition by, a customer or customers of such manufacturer."

From this language it is clear that a manufacturer is not to be prohibited from engaging in the retail business so long as he takes no undue advantage of the retailer in conducting the retail branch of his business. This law would merely tend to strengthen the Robinson-Patman Bill with specific reference to manufacturers engaging in the retail business. It really offers nothing new and would not change existing conditions to any extent.

DISCUSSION AT THE OPEN SESSION of the Federal Wholesale Druggists Association meeting recently held in New York centered around price maintenance. The point was raised that the Robinson-Patman Bill made operation under the del credere plan virtually impossible because all sales under this plan are direct sales and differences in prices to very large buyers must be justified on the basis of savings.

However, Walter Quinlan told that International Cellucotton Company still operates under this plan and justifies what differences it has in prices. Further, Mr. Quinlan told of the plan of allowing a retailer five per cent on his invoices if the retailer signs a contract to take $700 worth of goods in six months. This five per cent is justified on having definite orders in hand against which the company can buy and schedule production. And if the retailer does not order in all the merchandise, the company has the right

Our Family Album



EGYPTIAN OBELISK IN CENTRAL PARK, NEW YORK.

Few will remember the above advertising of Vaseline.

to ship him the balance. And if the retailer refuses shipment of the balance, the company does not grant him the five per cent allowance that is owed the retailer at the end of the contract for display. So it comes out even in any case.

Further than this the company grants retailers a certain number of lines of advertising in the local newspaper. Tearsheets and bills are sent to the company by the retailer. This advertising is available to every retailer depending upon how much goods he buys, the number of lines, and not the cost being the basis of comparison. All retailers do not get it because they do not demand it.

THE QUESTION OF INCREASING MINIMUM prices under price maintenance laws was an interesting topic. Some maintained that demands were being made for a full thirty-three and one-third per cent profit on sales by retailers, while others said they did not believe such a condition existed. General opinion was that gradual increases in the percentage of profit would have to be made over a period of time since retailers could not expect manufacturers to jump the retail minimums up the list prices all at one time. One wholesaler said the answer was that manufacturers should lower their prices so that minimum prices would assure the retailer a full thirty-three and one-third per cent profit without advancing prices to the consumer unduly.

THE QUESTION OF HOLDING BACK the wild-eyed retailers who are tasting blood is the real problem for the industry. The hard-heads among the wholesalers, retailers, and manufacturers who see the problem clearly might not be able to control the demand for full profit all at once. It is quite likely that the movement in some states might be beyond the control of those who take gradual steps in adjusting the retail profit situation.

ELIMINATION OF THE COSMETIC TAX becomes of increasing importance when it is realized that manufacturers of cosmetics and oral preparations are faced with the possibility of reducing their prices to grant the retailer a full profit margin and still keeping down prices to consumers. When it is realized that elimination of the tax would reduce the cost to the manufacturer of a fifty cent seller tooth paste by almost two cents per package, and would reduce the cost of a fifty cent seller cold cream by almost four cents per package, it can be seen what is meant.

APOLOGIES TO VICK CHEMICAL Company — there has never been a seizure of their goods, although in our February issue we said this had been done by the government, to compel a change in their advertising. Vick has courteously called this to our attention.

"How much advertising do I get on a five dollar order?"

But though wrong in this point of fact, we still believe we were right in principle, namely, that the FDA has on occasions, been so drastic in forcing its own opinions upon manufacturers through threat of seizures, that it is no wonder that manufacturers are afraid of what might happen if this department or any other department gets control of advertising without the law restricting enforcement to things that are not matters of opinion and to things that really matter.

We have looked up the facts in the Vick case—as given in the House hearings on S 5. In Vick's package circular was a section headed "Colds are Costly." The section urged that colds should not be neglected, and pointed out that a neglected cold paves the way for certain more serious infections.

This sound medical advice, which would be echoed by any physician, and which incidentally is almost exactly paralleled by a recent advertisement of the Metropolitan Life Insurance Company, was declared by the FDA to be a claim that Vick's product was a preventive of these diseases. The FDA threatened to make seizures within three weeks, seizures which might well have involved all shipments and put the company out of business, at least temporarily, with irreparable damage to trade-mark and good will.

It certainly seems strange that if this advice is the *truth*, and if the Metropolitan Life Insurance Company is *applauded* for publishing it, the same thing is a *crime* when a manufacturer says it.

It is this attitude upon the part of the FDA under its present powers over labelling that terrifies manufacturers when they think what might happen if the department had control over advertising to the same degree as they have it over statements made on the label or in circulars contained in the package. It indicates clearly that the new law must be written in such a way as to prevent any such condition from occurring in the case of advertising.

Our apologies, again, to Vick, but we still think we were right in principle.

At left, top to bottom: Enforcement Chief Walter G. Campbell; Assistant Chief Dr. P. B. Dunbar; Drug Division Chief James J. Durrett. Above: C. W. Crawford.

WATCHING

WHILE the Federal Trade Commission has been exerting every effort to make a showing of results in handling alleged false advertising cases and simultaneously quietly lobbying against the Copeland food, drug and cosmetic bill, the Food and Drug Administration of the Department of Agriculture is not letting any grass grow under its feet. It is too busy to be fairly described as watchfully waiting, but unquestionably is very watchful, not only of the progress of the food and drug bill in Congress, but of the activities of its rival, the FTC. While attempting to enforce the present food and drug law, as it interprets the same, FDA is quietly sawing wood, preparing to administer a new law, as, if, and when enacted, doing what it can to make friends on Capitol Hill and saying very little about what it is doing.

Inquirers at FDA about its policies, work, rulings, etc., are told that there is little new, that the Administration is proceeding generally along the same old lines. Dr. James J. Durrett, Chief of the Drug Division, FDA, told the writer he had no statement to make. He indicated that his time was occupied with handling seizure cases. His replies to questions about new rulings or projects relating to various classes of drug products were generally negative in character.

Some of his FDA associates, however, were more communicative. From them and from outside sources it appears

AND WORKING

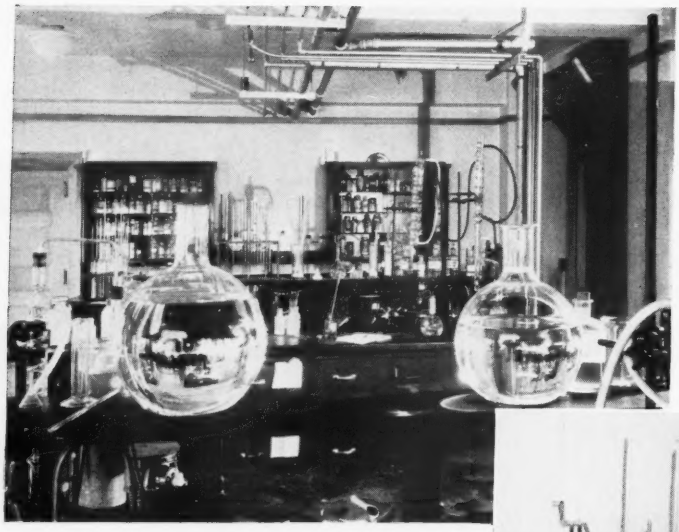
By H. C. HALLAM

that a number of matters and decisions are being handled that are of great interest to the drug, medicine, cosmetic, and toilet preparation industries and trades. Taking the last of these first, as is well known, the control of FDA, under existing law already extends over all co-called cosmetic and toilet preparations for which therapeutic claims are made. This extends also to such preparations for which food claims may be made. Under this policy, a cosmetic claim of curative action for skin trouble, for example, would subject the product to regulation as a drug in the matter of labeling, branding and adulteration. Some classes of beautifying products, or methods, or systems, for example, a diet for slenderizing purposes only, are held to be neither drugs nor foods.

While doing what it can to cover the entire field of drugs and foods, Dr. Durrett refers to a shortage of funds and personnel. His superior, Dr. Paul B. Dunbar, Assistant Chief of FDA, says that it is working along the project line in manner similar to that pursued for a number of years. In doing this, he says his staff is paying attention first to questions of public health such as may be involved in adulteration and misbranding and secondly to economic problems involved in such matters as the sale of worthless goods at high prices and the competition or substitution of inferior goods for legitimate products.

At top: Chief Chemist Dr. A. G. Murray. At right: Chief of Vitamin Division Dr. E. M. Nelson. Above: Dr. H. O. Calvery, in charge of Division of Pharmacology, with his glass-log rat cage.

Among the projects



Scenes in the FDA laboratory in Washington, D. C.

mentioned by Dr. Dunbar receiving special attention are claims for patent medicines under the Sherley amendment to the food and drug law, ethical products used largely by physicians, bio-assay types of drugs; glandular preparations, which are coming in for consideration just now, by the way, and finally, vitamin preparations, both in the drug and food fields. Among the drug preparations covered by these projects Dr. Dunbar mentioned particularly so-called remedies for influenza and related diseases. Many of these have been picked up and reported on by agents of the Department during the recent "flu" epidemic, although a number of others, according to Dr. Dunbar, have stayed out of the picture since the last big "flu" epidemic a number of years ago.

Asked about policies and rulings with reference to "flu" and cold remedies and analgesics, laxatives and various other classes of drug preparations, Dr. Durrett's general reply was that "the truth must be told" in labeling such goods.

Speaking of preparations for use in treatment of colds, it is learned that FDA officials have been objecting of late to the use of such words as "chest colds" in labeling such preparations. Some time ago they vetoed use of the phrase "deep-seated colds" on certain preparations, on the ground that the purchasers might think they were of value in the treatment of pneumonia. The general FDA idea, as gathered in the trade, seems to be that there is no suitable treatment for colds, as such, but only for the *symptoms* of colds. Formerly the official policy was that statements about the value of so-called cold preparations must be made at the manufacturer's risk. Referring to cold preparations generally, Dr. Durrett said to Drug and Cosmetic Industry's representative: "Colds are communicable diseases, not successfully treated by any of these medicines. There is no such thing as a cold remedy, no remedy that deserves to be referred to as such. None of them has any influence on a cold or its progress."

The policy regarding certain analgesic preparations, as outlined by Dr. Dunbar, is based on section 8 of the food and drug law, which requires that certain narcotics and narcotic preparations, alcohol, chloral hydrate, and acetanilid, or any derivative thereof, if contained in a preparation, must be stated on the label. The ingredients mentioned are described by Dr. Dunbar as being known to physicians generally and, to a considerable extent to the layman, as habit-forming. This seems to be the policy which controlled the New Hampshire Board of Health recently in condemning a certain preparation. According to rumor, the Board's action was taken on information or suggestion from FDA that coal tar ingredients of the preparation were narcotic and habit-forming. Objection was made to the label statement that the product was "non-habit forming" and contained no harmful drug, also the claim that it was not narcotic. The preparation in question contained aspirin, acetphenetidin and caffeine. It appears that its label did not declare the presence of an acetanilid derivative.

As understood in trade circles, the ruling of Drug Control of FDA is, in effect, that anything that relieves pain is a narcotic. However, Dr. Durrett and other FDA officials insist there has been no general ruling that analgescis belong to the narcotic group. Outside authorities declare that the attempt to class all pain relievers as narcotic is contrary to the definition of a narcotic given in standard and medical dictionaries and is also not in accord with the principle of the Harrison antinarcotic law.

Dr. Dunbar extends the scope of section 8 of the present law to cover barbituric acid preparations and certain other preparations of similar character. Barbiturates, he said, are habit forming and if used in a medicinal preparation must be shown on the label, under section 8. The application of this requirement, he indicates, is based upon medical opinion. If medical opinion holds that barbiturates or other hypnotic preparations are habit-forming drugs, then they must be stated on the label, even though they are not mentioned specifically in section 8.

This FDA policy is regarded as of special significance and importance to the drug and medicinal trade, in view of a provision in the new Copeland food and drug bill

authorizing the Secretary of Agriculture to issue regulations naming barbiturates and other drugs of the groups above indicated, and requiring their presence to be shown on labels, on the ground they are narcotics or habit forming.

A recent FDA policy is reported to be that if the formula of an old-established proprietary preparation is changed, even to the slightest degree, then it cannot bear the same old name. Under this policy, if the writer had been making cough drops, according to a certain formula, and sold as "Hallam's Cough Drops," but later improved the formula and product by changing the ingredients, possibly by adding a better or more effective ingredient, the product could no longer be sold as "Hallam's Cough Drops." A ruling to this effect is said to have been rendered by A. G. Murray, Chief Chemist of FDA.

The ruling is said to be based on the theory that old purchasers of a preparation made by a certain formula would be deceived if they were sold a slightly different product, even though it were a better product, under the same name. This ruling is regarded as a hardship by certain trade interests. The latter insist that such strict requirements as to ingredients and formulas might properly be applied to U.S.P. preparations or National Formulary preparations, since both of those compendiums specify exact requirements as to ingredients and preparation, but that it is unnecessarily rigid in its application to proprietaries.

Mr. Murray modestly declines to discuss the work of the Chemical Division, FDA, but he is understood to stand very high in the official councils, particularly in consultation with Dr. Durrett, by reason of the former's long experience and arduous labors in behalf of pure foods and drugs. In the old days, before his excursion into the drug manufacturing field, Dr. Durrett was reported to be irked at times by the recognition then given to the Chemical Division in passing upon drug products. In the last year or two, however, Durrett is reported to be more and more inclined to consult with Mr. Murray and accept his views.

Use of the old-fashioned name paregoric is strictly out, under FDA rules, except as a synonym for the official title of that preparation—namely, tincture opium camphorated. In other words, if the name "paregoric" is used, the longer name must also be used. Another instance of departmental construction excludes use of the name "dinner pills" for an old-time laxative preparation. This seems to be similar to the ruling of several years ago forbidding use of the old title "Doan's Kidney Pills."

Some years ago, it may be recalled, an official FDA statement was issued denouncing phenolthalien, the well-known laxative ingredient, as having caused the death of a child. As a result of that denunciation, it is reported, sales of phenolthalien dropped materially. Then a fund was established for research concerning phenolthalien and Dr. Fantus, well-known American Medical Association authority, was placed in charge. Recently a partial report on that research stated that use of phenolthalien did not produce albumen in the kidneys. This research work is being continued along other lines and further reports will be forthcoming, which manufacturers predict will show that phenolthalien is equally harmless in other respects.

While pharmaceutical preparations have perhaps not been molested so much as proprietary preparations, nevertheless under a policy of FDA it has been necessary, practically speaking, to state the ingredients of a number of these preparations twice on the same label. The requirement as to some pharmaceutical compounds containing more than one active ingredient, that all such ingredients must be stated in the title or name of the product, if any of them is so stated. Then, further down on the label, the full list of active ingredients is printed in accordance with the usual trade custom.

One of the renewed activities of FDA concerns survey or inspection of prescriptions in the District of Columbia. Washington, D. C., is about the only section of the country in which FDA has jurisdiction over retailing to that extent. A partial survey of prescriptions in the National Capital some time ago showed that about 65 per cent. were found unsatisfactory, although mostly not seriously so. While FDA activity with relation to retailing cannot be extended beyond the District of Columbia, nevertheless druggists and others interested think that such activity may suggest to state food and drug authorities strict surveys and technical enforcement against the retail prescription trade. If this should develop, it would be only another step in the following of FDA suit by state and local officials.

The Federal Trade Commission often consults FDA, the Bureau of Standards, and other authorities about medical opinion with reference to certain drug products, advertising of which has been brought to the attention of the Commission. The latter usually submits evidence on such subjects to the manufacturer concerned for comment and to afford an opportunity for evidence on the other side. Oftentimes FDA information and advice given to the Commission has been found to be "all wet," in the opinion of the manufacturers.

Citing FDA drug work along important lines, Dr. Dunbar listed as striking examples the attacks of his organization upon the labeling of many preparations with remedial claims for pneumonia, influenza, cancer, gallstones, rheumatism, diabetes, Bright's disease and venereal diseases. He also mentions specifically important sampling and testing of ether and ergot and other drugs, and the FDA objections to substituting isopropyl alcohol for ethyl alcohol in rubbing alcohol compounds.

The drug work of FDA is allocated among several divisions. C. W. Crawford, Chief of the Interstate Division, concentrates on seizures and similar proceedings involving interstate commerce. Just now Mr. Crawford is the man at the throttle in FDA's fight to secure what it considers adequate food, drug, and cos-

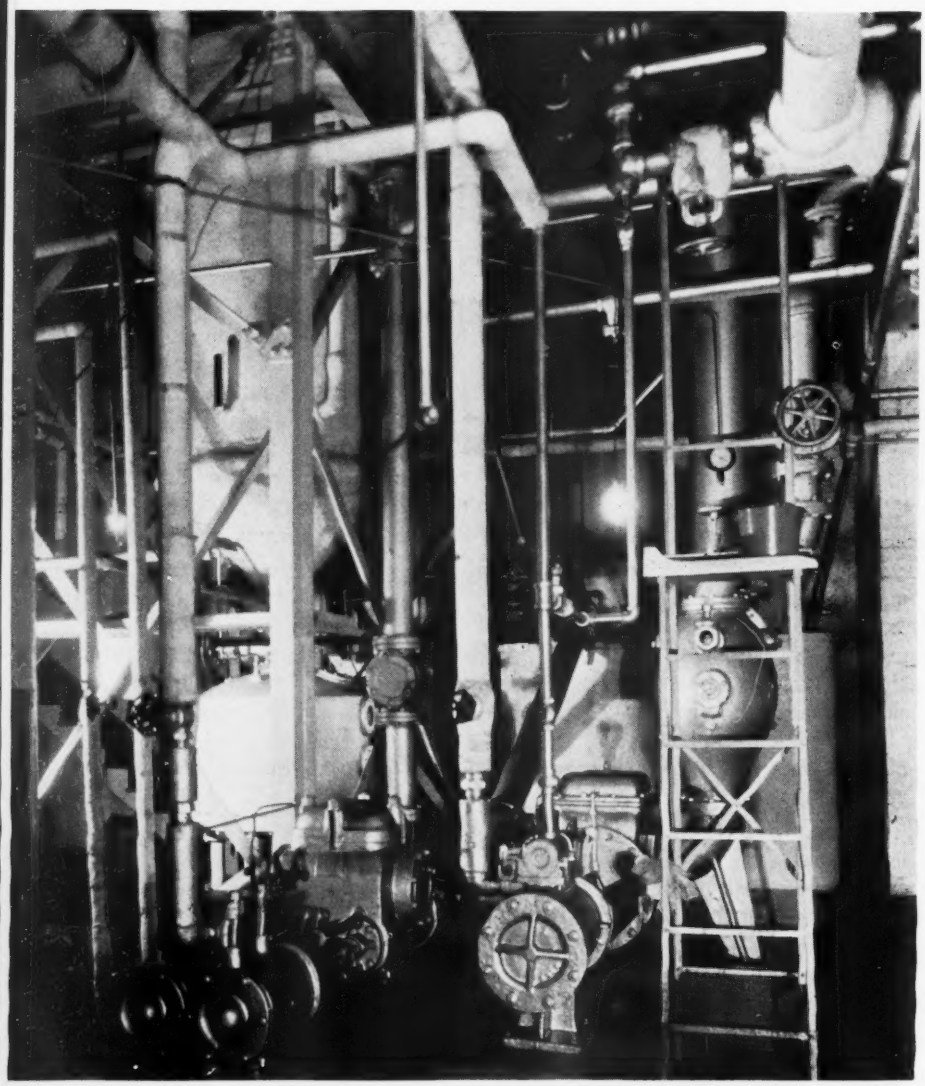
(Continued on page 371)

GLYCERINE

GLYCERINE, little step-child of the soap-making industry, has been occasioning unusual interest by its scarcity during recent months. Not since 1926 has there been such a shortage and the trend, which started early last year, is reaching rather alarming proportions.

A number of reasons are advanced for the present market condition. Depression prices of glycerine, reaching a low of four cents a pound in 1933, made production unprofitable and large quantities ran off as waste. Curtailed soap production during the first half of 1936 further reduced warehouse reserves to a measurable extent. Recent increased activity in those branches of industry needing this raw material has depleted the scanty reserves, in many cases faster than they can be replaced; and several large soap manufacturers in the flood area had to cease operation entirely.

The beating of European war-drums has caused a tightening up on exports of glycerine from several foreign countries and has led to a certain amount of hoarding of this war-time necessity. Germany, in November of last year, prohibited all exports of glycerine except in cases where special permission might be given.



Whatever the cause or causes, the result is apparent. In many sections of the country there has been a serious shortage of glycerine for anti-freeze solutions since early in the winter. And the low price of four cents a pound, rising to fourteen cents by January 1, 1936 and twenty-one and one-half cents a year later, has now reached thirty cents and is still rising. Orders are far in advance and no immediate relief is in sight.

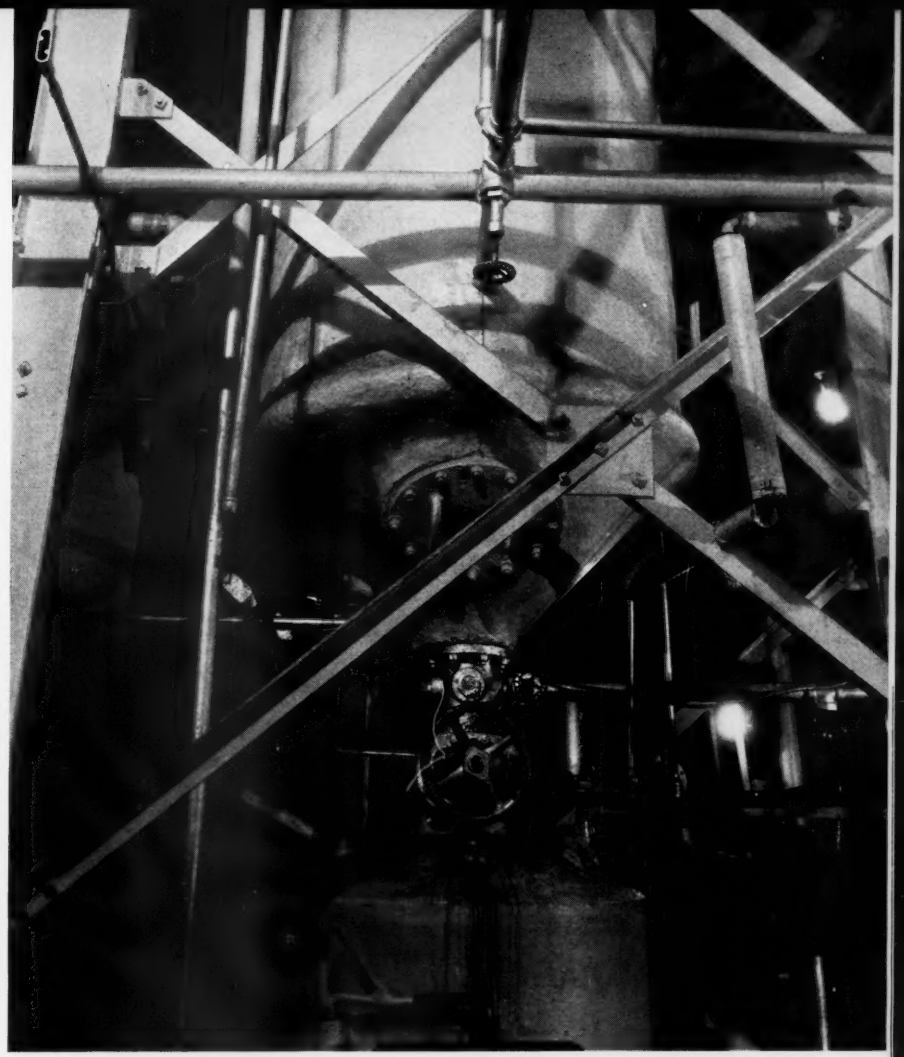
Because of this unusual condition, a few words on the importance of glycerine in modern life are timely.

* * * * *

Historically, glycerine is rather new. Romans of the first century no doubt enjoyed its properties in a soft soap of tallow and beechwood ash alkali described by the Roman writer Pliny as being in common use at that time; but they did not know it as a separate element.

Glycerine, as we know it today,

By ISABEL BENNEY



PHOTOS COURTESY MACNAIR-DORLAND

was only discovered in 1779 by a Swedish druggist, Dr. Karl Wilhelm Scheele, when preparing a lead plaster by boiling oxide of lead and water with olive oil. He named it ölsüss but it was regarded only as an oddity. Dr. Scheele's death a few years later prevented his realization of the magnitude of his finding. Yet a few years ago, on the occasion of his birthday anniversary, he was internationally honored for his "service to humanity by enriching science, industry and the arts."

It was not until 1813 that Chevreul, working on fats, studied glycerine more closely and gave it its present name from the Greek word meaning "sweet." Pelouze in 1836, Bertholet and others established its formula. Pasteur, in 1858, showed it to be present in beer and wine as the result of the alcoholic fermentation of sugar by yeast, normally to the extent of three per cent. In 1912, Neuberg found that if the fermentation took place in the presence of certain salts a yield as high as twenty-five per cent. of the weight of the sugar might be obtained. This fact was used by certain powers during the war in making glycerine from cheap sugar and molasses.

* * * * *

Chemically, glycerol or pure glycerine, is a clear, almost odorless, syrupy liquid varying from colorless to pale yellow and having a slightly sweetish taste. Its specific gravity is 1.2604, boiling point 290° C., and melting point 20° C. It is easily miscible with alcohol or water in any proportion, less so with ether, and is rarely seen in its solid state.

But perhaps its most valuable property, and the one which has caused it to be used in such a variety of ways, is its ability to absorb and retain moisture up to fifty per cent. of its weight; nor does it evaporate or turn rancid.

* * * * *

While found to a very limited extent in palm oil and certain of the rare oils, fatty acids are the richest source of glycerine. For this reason, commercial glycerine is made almost solely as a by-product of the soap industry. The fatty acids are treated with caustic soda to produce soap, the resultant soap-lye being run off and the glycerine retrieved from it. Approximately twenty-five tons of soap are required to produce one ton of glycerine so that low costs and fair glycerine prices are necessary to encourage a sufficient supply.

Crude soap-lye contains eighty per cent. glycerine and ten per cent. salt. A simple concentration of the lye gives a crude glycerine. Distillation is necessary for refined or dynamite glycerine. Further distillation, and a charcoal process which removes the trace of yellow color, gives the trade the chemically pure or C. P. grade used for pharmaceuticals, medicines, cosmetics and a number of other products. The chief commercial grades in use today are known as C. P., yellow distilled, dynamite and crude.

Most of the imports to the United States are in the form of crude which is generally refined here but occasionally used in the original form for printers' inks, anti-freeze compounds, plastic clay and the like. Imports of crude glycerine supplied fifteen per cent. of the

crude domestic consumption in 1925, nine per cent. in 1934 and only three per cent. in 1935.

Glycerine's main competition, aside from that arising between domestic and imported varieties, comes from ethyl alcohol, methyl alcohol and ethylene glycol for anti-freeze purposes and from the latter in the production of dynamite. The cosmetic industry also has fairly satisfactory substitutes.

Some synthetic glycerine is being made in Italy and attempts have been made to produce it synthetically in this country. Germany is now experimenting with the production of fatty acids from coal and petroleum. Successful development of these trials would release vegetable and animal fats for glycerine production, especially those now used for cold-made soaps where the glycerine is not removed. It may also lead to a connection between coal products and explosives.

* * * * *

To enumerate all the various uses of glycerine would be practically impossible. For nearly a century after its discovery, little practical need was found for it. The French are credited with its early commercial development about this time. Realizing its ability to retain moisture, they experimented with it in their muslin-making factories where the rooms had to be kept at an unhealthy humidity to prevent the continual breaking of the delicate threads. Success with glycerine-treating led to its widespread use in textile mills and thence to many other industries.

Its most rapid increase in use has occurred since the World War. In 1913, domestic production of glycerine in this country was 40,000,000 pounds with 80,000,000 pounds produced in the rest of the world. Imports to the United States varied from 30,000,000 to 40,000,000 pounds.

U. S. production and import figures from 1919 onward follow:

United States Production

	Crude, 80 per cent basis *Pounds*	*Dynamite Grade* *Pounds*	*Chemically Pure* *Pounds*
1919	61,792,958	25,635,594	36,692,530
1920	54,688,295	31,571,047	32,859,844
1921	63,946,751	26,944,290	30,322,980
1922	85,337,034	33,907,226	39,912,929
1923	99,578,781	32,368,999	47,992,025
1924	95,153,809	37,368,230	53,242,737
1925	103,406,943	52,658,326	55,447,832
1926	116,369,207	49,579,408	64,459,610
1927	128,208,642	49,265,633	59,126,182
1928	130,498,492	46,621,767	66,419,217
1929	140,079,568	58,981,430	66,790,647
1930	138,675,191	50,974,056	69,654,223
1931	140,001,604	43,366,048	70,527,961
1932	133,918,825	41,538,670	63,623,975
1933	119,811,648	45,534,280	58,585,438
1934	153,115,463	48,553,475	80,358,660
1935	140,083,569	48,685,282	74,704,505

United States Imports of Crude Glycerine

	Pounds	*Value*
1919	3,813,630	$444,797
1920	22,411,025	2,934,371
1921	2,774,676	393,020
1922	3,603,745	347,089
1923	14,548,660	1,429,687
1924	14,427,054	1,499,564
1925	19,264,654	2,236,369
1926	27,658,552	3,996,230
1927	14,943,670	2,215,159
1928	4,915,651	355,905
1929	14,851,901	863,552
1930	11,144,193	650,116
1931	10,132,963	525,599
1932	5,382,252	204,626
1933	8,473,085	246,895
1934	15,081,227	1,040,065
1935	8,220,934	656,734

United States Imports of Refined Glycerine

	Pounds	*Value*
1919	39,059	$4,471
1920	5,381,737	1,170,030
1921	510,171	95,104
1922	161,358	28,275
1923	585,792	76,994
1924	1,500,644	229,897
1925	2,043,606	305,796
1926	10,866,567	2,333,169
1927	8,338,557	1,705,025
1928	4,326,663	464,986
1929	5,381,684	491,867
1930	3,136,809	265,093
1931	1,965,535	140,975
1932	2,347,508	142,359
1933	2,775,687	166,991
1934	2,213,942	208,989
1935	68,566	8,277
1936	3,447,487	

Imports of crude glycerine for the first ten months of 1936 were 8,763,286 pounds valued at $897,648, an increase of eighteen per cent. over the same period of 1935 and a slight increase over total imports for the entire year of 1935. The largest increase has taken place in imports from Cuba.

Domestic production of glycerine for the first six months of 1936 amounted to 128,400,000 pounds and showed a decline in all grades in the following proportions: Crude 80% basis declined from 75½ million pounds to 70 million; dynamite—25 million to 22 million; C. P.—40 million to 37 million pounds.

* * * * *

The largest users of glycerine today are the varnish industries, explosive manufacturers, medicine and pharmaceuticals, tobacco and cosmetics. One authority lists eighty-two different uses for glycerine as only a few of the many. In general, glycerine ranks high as a sweetner, preservative and solvent. Its ability to retain moisture makes it invaluable for creams and liquid soaps, cigarettes and printers' inks and similar substances.

(Continued on page 369)

RACHEL

Under the Supervision of The Department of Labor

By J. P. SNYDER

FOREWORD:

TO MY FRIENDS in the Industry who must of necessity be required to read "*The Home Medicine Cabinet*," Consumers' Project under the Supervision of the U. S. Department of Labor, this attempt upon my part to invade the literary field is dedicated.

If you already have read "*The Home Medicine Cabinet*," you will recall the trite saying, "A little knowledge is a dangerous thing." Like myself, you may also be impressed with the hope that some later-day literary genius may put together words from the English language to adequately and effectively define complete absence of knowledge.

The Pharmacist plays an important part in our daily lives. He gets out of bed and opens his store late at night, to meet our emergencies. He is skilled in the art and science of preparing medicine. It is neither fitting nor proper for a powerful department of the Government to lend itself to a project which recommends the preparation of U.S.P. and N.F. products in the home.

The author hopes that his contribution may in a small way serve to stir up public opinion, that the Pharmacists' rights may be preserved.

The many ludicrous situations in "Rachel, Under Supervision Of The Department of Labor," may be sustained by simply reading "*The Home Medicine Cabinet*." The scientific and legal facts it is not felt will be disputed.

The author seeks no notoriety, but if "Rachel, Under The Supervision Of The Department Of Labor" may tend to curb boondoggling Consumers' Projects, that result in misinformation, rather than information, it is his hope that it may receive wide publicity.

There is, no doubt, always a need for a properly written book describing up-to-date requirements for The Home Medicine Cabinet. There are many capable physicians, chemists, bacteriologists and pharmacists in the employ of the Government thoroughly competent to prepare it. If the Government desires to sponsor such a book, it is suggested that such individuals be detailed to compile the information. Home remedies are far too important to be delegated as a Consumers' Project.

THE AUTHOR.

MRS. Average Citizen who carefully scans the daily paper notes that a booklet, "*The Home Medicine Cabinet*" will be sent free upon sending her name and address. This she forwards, and in due season her copy is received.

She reads and is deeply impressed, particularly at once she notes that all the necessary medicines required for The Family Medicine Cabinet may be procured for the estimate of $1.50. She has visions of stretching the family budget. Look at the money she can save by making the family dentifrice! The Easter hat may become a reality. Perhaps it will no longer be necessary to creep stealthily from bed late at night and search carefully through hubby's clothes for odd change.

Mrs. Average Citizen, therefore, finds that the first item for the Family Medicine Cabinet is an antiseptic for cuts and scratches. The specifications she sees are meticulously given on page 3. She should get a 7% Tincture of Iodine, but since this is too strong and it is safer to use at 3½% strength, it should be diluted with grain alcohol or rubbing alcohol. She also notes on page 14 the following:

"*If the druggist is asked to do the mixing the price is likely to be so increased that no saving is effected.*"

Accordingly she decides to buy her own alcohol and do her own mixing, thus making a further saving. Also, she puts down on a piece of paper the formula for the dentifrice, because with the instructions which "Rachel, Under The Supervision of The Department of Labor" has given, she is now prepared to become the manufacturer of the family dental powder.

Now she knows that with the support of The Department of Labor she will show George what a really successful manager of the household she has become. "Oh! if George could only see the light and write our Government for instructions as to how to run his business, I am sure Rachel could tell him how to become a wonderful success."

So next morning Mrs. Average Citizen hies herself to I. M. Wise's Corner Drug Store. Mr. Wise has been in the drug business for over thirty years, is a respected member of the community, prominent in civic affairs, and his real pride is serving the public with quality

pharmaceuticals. The conversation runs something like this:

"Good morning, Mr. Wise, I am anxious to make several purchases for The Family Medicine Cabinet."

"I shall indeed be happy to serve you, Mrs. Average Citizen, and my store is well stocked with the products of leading manufacturers, many of which are nationally advertised, and I am sure will serve you admirably."

"Oh no! Mr. Wise, I can no longer use advertised products, many such products carry claims which are false and fradulent; you know *under the present Food and Drugs Act, the Food and Drug Administration is powerless to take action against any manufacturer for claims made in Advertising—no matter how false and misleading they may be.*"

"Mrs. Average Citizen, technically you may be correct, but actually it is my opinion that you possibly may not have been correctly informed as to what is really taking place. It is true that the Food and Drug Administration may not act in cases of false advertising, but there is another arm of the Government—*The Federal Trade Commission*—which is fully empowered to cope with false and fraudulent claims. In fact, I may say that Drug Associations of which I am an active member, report that the Federal Trade Commission is successfully prosecuting hundreds of such false claims. Besides, Mrs. Average Citizen, the firms from whom I secure my merchandise have old, established reputations and they would not stoop to misrepresent their products. I am personally acquainted with many of the executives of these firms and they certainly would not permit such a policy in their companies. In truth, they could not afford to do so."

"Well, Mr. Wise, I did not come here to start an argument. Anyway, I am going to follow 'Rachel's' advice, because she has told me how to save money."

"Now, I want some Tincture of Iodine. Also, Mr. Wise, I want this Iodine in a glass stoppered bottle, because Iodine deteriorates cork."

"Here you are, Mrs. Average Citizen, a 2-oz. bottle, also the glass stopper. We only dispense Iodine in glass stoppered bottles and are well aware that it deteriorates cork."

"Now, Mr. Wise, I want some alcohol—and I want you to tell me about it. I may use either grain alcohol, or rubbing alcohol, particularly which is the cheaper."

"Rubbing alcohol, Mrs. Average Citizen, is the cheaper. You see, the Government places a tax of approximately $4.00 a gallon on grain alcohol. Rubbing alcohol is prepared from specially denatured alcohol, which avoids this tax. The formula must be denatured under the supervision of the Government and permits are issued to reputable manufacturers to compound it into rubbing alcohol. I have a rubbing alcohol manufactured by 'Good and Good,' who have been in the pharmaceutical business for over half a century. I am sure it will give you satisfaction."

"Well, Mr. Wise, does it contain 70% alcohol? You know—

"Some Rubbing Alcohols are labeled '70 proof' which to many people might mean the same as 70%. actually it means that the compound contains only 35% Alcohol, half of that required by the law."

"Yes, Mrs. Average Citizen, this product contains 70% alcohol, is so labeled and guaranteed by the manufacturer. Your information to the effect that it is the law that it must contain 70% alcohol, however, is incorrect. Regulations require that it does not exceed 70% alcohol. However, a manufacturer is at perfect liberty to manufacture it less than 70% if he cares to do so. He, of course, must declare the actual percentage of alcohol by volume on his label."

"Well, Mr. Wise, I will take a bottle, and now I want some ingredients to make our dental powder. Don't you think it perfectly darling of our Department of Labor to have a Consumers' Project under its supervision that shows us how to save our money? You see, Rachel has told us the ingredients in the National Formulary powder, how to stir them together, shake them up in a mason jar, and use it in a salt shaker. Better still, Mr. Wise, Rachel says—

"If the Druggist is asked to do the mixing the price is likely to be so increased that no saving is effected."

"Isn't that just grand, Mr. Wise, to tell me how to make that saving by doing my own mixing?"

"I'm sorry, Mrs. Average Citizen, but I do not see eye to eye with you on this proposition. I am called upon to spend several years at College where I study the Pharmacopoeia and National Formulary products, and how to properly compound them; also I must invest heavily in equipment to manufacture them; in addition, I pay taxes to our city, to our state and to the Federal Government. Particularly are the Federal Government taxes increasing and becoming burdensome. Boondoggling Consumers' Projects at Washington are requiring more and more money and the taxes are eating heavily into my already meager profits.

"Certainly, Mrs. Average Citizen, I feel that I should have the support of the Department of Labor, and that

they should not lend their hands to questioning a legitimate price for compounding a National Formulary product, and recommending a method of home mixing which may yield a doubtful product.

"Surely I shall introduce a measure at the next meeting of our Association condemning such a practice by The Department of Labor and specifically requesting that they refrain from similar projects in the future. However, Mrs. Average Citizen, I shall be very happy to serve you with an ounce of hard soap and a pound of precipitated calcium carbonate and lesser quantities of the other ingredients. I presume your home is equipped with balances and other equipment for measuring the necessary quantities of the ingredients?"

"Why Yes, Mr. Wise, I still have the scales we used to weigh Johnny on when he was a baby. Surely they are satisfactory?"

"Well, hardly, Mrs. Average Citizen, I would not use them in my store. When I was at college we spoke of such slovenly methods of compounding as those 'Rachel, Under The Supervision of The Department of Labor' suggests as 'tin-can pharmacy.' Perhaps the mason jar is an added refinement, but from my viewpoint I see very little improvement. If myself or any other manufacturer did not take more care in the preparation of pharmaceuticals and introduced them in interstate commerce they would not be uniform throughout, and we would be subject to fine and imprisonment under the Federal Food and Drugs Act."

"Then, perhaps Mr. Wise you would not recommend that I attempt to make my own dental powder? But surely, Mr. Wise, you don't pretend to know more about drugs than Rachel does, and besides—she is under the supervision of our own Department of Labor."

"Well, I can tell you Mrs. Average Citizen that it's my opinion, as well as that of many excellent men who have devoted their lives to pharmacy, that Pharmacopoeial and National Formulary products should only be compounded by registered pharmacists, men qualified by education and experience to make quality products."

"Well, Mr. Wise, your arguments certainly seem sound and I'm going to take your advice. I hate to give up the saving to apply to my new Easter hat, but I am inclined to feel that you are right."

"Of course, Mrs. Average Citizen, I will be very glad to make you up a quantity any time you require it, also I can assure you that my charges will not be prohibitive. On second thought, I recall that the last time George was in my store he spoke very highly of 'Dentilow,' said it kept his teeth perfectly white, that he particularly liked the flavor; and he said the container in which it is packaged is a dandy."

"Well, Mr. Wise, I guess that is all for today, but next week I'm coming back for some gauze and cotton. You know, 'Rachel, Under the Supervision of The Department of Labor,' gave me the most wonderful idea. She says—

"Small, covered Mayonnaise Jars, made sterile by boiling, are excellent containers for Gauze and cotton."

"Now I know how to put to use my old mayonnaise jars."

"Of course, Mrs. Average Citizen, the gauze and cotton which I handle are put up in sterile containers by the manufacturer, but I'm very happy on account of my friend Jones the Grocer, that Rachel doesn't recommend that you make your own mayonnaise and that he may continue to enjoy your business on that item. You know, Jones too pays taxes. However, I am happy that you can make use of these mayonnaise jars. Personally, I think that Rachel, in order to be consistent, should recommend that you make your own mayonnaise as well as your dental powder."

"Good day, Mr. Wise." "Good day, Mrs. Average Citizen."

Mrs. Average Citizen hurries home with her purchases of Tincture of Iodine and rubbing alcohol, enters the house and removes her wraps, and hurries to the kitchen sink to make the mix and get her savings for her new Easter hat.

To her utter consternation, she now finds that the bottle of Iodine is completely full and there is no space in the container to add the rubbing alcohol. Finally she decides that the essential antiseptic for cuts and scratches must be prepared, so down the sink goes half the Tincture of Iodine (together with a part of the savings for the new Easter hat). Naturally a goodly portion is spilled over her hands and leaves a nasty brown stain. However, she adds the rubbing alcohol and carefully replaces the stopper. Now to put it in The Home Medicine Cabinet.

Before placing it in The Home Medicine Cabinet, Mrs. Average Citizen thoughtfully recalls that Rachel has given the following advice regarding labels:

For information regarding any Drug Product it is necessary to consult the label rather than the advertising. The Food and Drug Administration can take action against a Manufacturer who makes false and fraudulent claims in his labeling. It has no corresponding power over advertising."

So Mrs. Average Citizen carefully scrutinizes the

label. The first thing she sees is the skull and crossbones and "POISON." Aloud, she says:

"Poison, Poison! I am sure 'Rachel, Under the Supervision of The Department of Labor' says something in her booklet regarding poison. I must find it. Oh Yes! I have it on page 12:

"*Poison should not be kept in the Medicine Cabinet but in a special place carefully locked up entirely out of the reach of children. A pin in the cork of the bottle of Poison is an added protection.*"

Again, aloud, Mrs. Average Citizen says—"Now isn't that awkward? Rachel lists under—

"*What Should a Medicine Cabinet contain?*

"*Antiseptics for Cuts and Scratches.*"

On page 3 she says—

"*What Antiseptic Does the family need? Iodine.*"

"Rachel tells me in one place that Iodine is the only necessary antiseptic. It should be in the Medicine Cabinet, and now on another page she tells me that it must not be kept in the Cabinet because it is a poison. What am I to do? Rachel knows because she is Under the Supervision of The U. S. Department of Labor, and a letter of transmittal has gone forward describing her work to The Honorable Frances Perkins, but why doesn't she tell me?"

"Well, I have an idea. Last year, after the plumber's helper helped himself to two quarts of George's imported Scotch, George got terribly mad and bought a steel cabinet with a Yale lock in which to keep his liquor. Perhaps George won't like it, but I'll just take out the liquor, lock up the bottle of Iodine and hide the key. Certainly we can't leave this deadly poison unprotected with Children in the house.

"Last week, when I ran across the street to borrow a couple of eggs from Mrs. Green, she told me that she always kept everything handy for emergencies in the Family Medicine Cabinet, but Mrs. Green can't really know because she is not Under The Supervision of The Department of Labor. But wasn't it really thoughtful of Rachel to suggest that a pin in the cork of a bottle of poison is an added protection? Certainly I'm going to take this precaution. Here's a pin but, Oh dear! Rachel said to get a glass stopper bottle. I can't get a pin in the glass stopper. Rachel must have forgotten to write the necessary instructions, and I don't know, so I guess I'll have to get along without it."

So Mrs. Average Citizen removes the liquor from the cabinet, locks up the Tincture of Iodine, hides the key, and leads the customary uneventful life for the next two or three months. Then, one day there is a loud clatter on the front porch. The door is banged open and in rushes Johnny somewhat bedraggled and covered with mud.

"Oh mother! I was playing tag with the boys and I tripped over a stone, fell down and badly skinned my knee. Also I bumped my eye against another stone and its terribly scratched. It hurts awfully. Can't you do something?"

"Never mind, Johnny, 'Rachel, Under the Supervision of The Department of Labor' told mother just what to do. I will get the wonderful antiseptic she recommends and in a few minutes everything will be all right. Now let me see, where did I put the key? It can't be that Mrs. Green was really right when she says that everything should be kept in the Medicine Cabinet for emergencies. Did I hide it under the mattress, in the cupboard, over the kitchen sink, or was it in grandmother's old dish in the china closet? Oh dear! I can't think."

Then follows a mad scramble all over the house to search for the missing key. Finally, after half an hour, it is located behind the clock on the parlor mantle. Mrs. Average Citizen rushes madly to the basement cabinet, gets the Iodine, and then rushes back up the stairs to the bathroom.

"Now Johnny, we will soon have you fixed up hunky dory. My, but that eye does look bad. Perhaps I should look in the book and see just how 'Rachel Under The Supervision of The Department of Labor' would treat it. Well, here it is on page 4—

"*Iodine: It should never be used by the layman near the eyes, in the mouth, or any of the other body cavities.*"

"Now isn't that just too bad? Now I can't use this wonderful antiseptic near the eyes. Johnny, next time you fall down use more caution and be sure and skin your arm or shoulder so I can follow out Rachel's instructions."

"Well, what about that knee? You sure took a lot of skin off when you fell, but mother will wash out the dirt and we will have the Iodine on it in a jiffy. But I wonder what Rachel recommends? Here we have it on page 4—

"*It should not be applied to a large skinned surface nor to a large open wound.*"

"Now really, what am I to do? The knee looks pretty badly skinned. Rachel doesn't put any yardstick in her booklet whereby I can tell what is a large skinned surface, so of course I can't take a chance and put Iodine on Johnny's knee."

While Mrs. Average Citizen is thinking what to do there is heard a loud crash in the kitchen followed by a scream—

"Oh, mother, Help! Help!"

Susie, aged eight, had joined in the mad search for the key, unaware that it had been located. She conceives the idea that it might have been put on the shelf over the kitchen stove, gets a chair, climbs up and proceeds to search. The inevitable happens; the chair tips over, down comes Susie, the tea kettle of boiling water, to land together in the coal bucket.

"Oh, mother, I burned my hand terribly and when I fell in the coal bucket I broke open the blister, and it is all full of nasty coal dirt."

"Well, never mind, Susie, mother has the Iodine, come right up to the bathroom."

"Perhaps, however, I had better see what 'Rachel, Under The Supervision of The Department of Labor recommends.' Oh yes, here we have it on page 9—

"*Don't Use Iodine on a Burn.*"

"Oh, children! What am I to do? Now I know there ought to be some way to treat these minor injuries. Rachel has the best of intentions but actually she hasn't really helped in this emergency. I just must call Dr. Smith and let him treat your injuries."

While Mrs. Average Citizen is waiting for Dr. Smith, she meditates as follows, over the Tincture of Iodine—

"The Medicine Cabinet, Rachel says, ought to contain an antiseptic. She says that Iodine only is the correct antiseptic. Then when I get it she tells me I can't put it in The Medicine Cabinet because it is a poison. It is the antiseptic usually recommended in the majority of first-aid books but I can't use it near Johnny's eye, and I don't know whether his knee is too badly skinned to warrant its use. Under no circumstances must I use it on Susie's burned hand. Really, I wonder just what 'Rachel, Under The Supervision of The Department of Labor' expected us to do—perhaps she just wanted me to keep it. But no, she says—

"*Because of the danger of Iodine becoming too strong to use safely it should not be kept longer than one year.*"

"Now I wonder if it is still all right? I think I'll open it and have a smell."

So Mrs. Average Citizen removes the stopper and takes a good whiff, and then—

"Help! Help! Oh my eye! Water, Water! Lead me to the bathroom. I must have water on my eyes!"

Johnny and Susie, still with their injuries undressed, finally get her to the bathroom and apply towels soaked in cold water, and in about ten minutes she has recovered. Now she is really mad. But listen to her yourself.

"Rachel, Under the Supervision of The Department of Labor warned me that—

"*The advertising for some potentially harmful Headache remedies sometimes states that they contain no Narcotics, and makes other claims that lead the consumer to believe that these products are safe.*"

"Elsewhere I have read that there are many other dangerous products on the market, and this terrible Mr. Wise—he is hand in foot with them in promoting their nefarious schemes. I am going to call him on the phone and give him a piece of my mind. The very idea, trying to poison me with inferior Tincture of Iodine."

"Hello, Central, give me 69 party J. Hello, Mr. Wise? Well, Mr. Wise, what do you mean by palming off on me inferior and worthless Iodine? I just opened the bottle and it is terrible. It nearly burned out my eye. I think you would know better than to sell me such a product."

"Just a minute, Mrs. Average Citizen, I can guarantee the Tincture of Iodine that I sold you. I purchased it from a reliable manufacturer and when it was received I personally tested and assayed it. It meets the U. S. P. specifications, and I know it is correct. Perhaps you may have done something to it after you left my store."

"The only thing I did, Mr. Wise, was to pour out half of the contents and add an equal quantity of rubbing alcohol that I got at your store. Just like Rachel, Under The Supervision of The Department of Labor told me to."

"What! Mrs. Average Citizen, you added rubbing alcohol to Tincture of Iodine? Well, I'm sorry that you did not tell me that you were going to do so because I would have advised you not to do it. You see, rubbing alcohol is incompatible with Tincture of Iodine. In addition to the alcohol contained in rubbing alcohol, the Government formula requires it to contain acetone and other ingredients. When added to Tincture of Iodine, on standing it undergoes a complex chemical reaction. A new compound results, somewhat along the lines of the tear gas used during the war. It is this that caused your eyes to smart. Rubbing Alcohol is all right for bathing and massaging purposes, but it should never be used to mix with Tincture of Iodine. Anyway, doesn't 'Rachel, Under the Supervision of The Department of Labor' know the law of the land regarding U.S.P. preparations?"

"Oh yes, Mr. Wise, I am sure Rachel knows the law because on page 3 she says—

"*A dealer who sells a product as being of U.S.P. Quality, when it does not, in fact, meet that standard is liable to prosecution.*"

"Well, technically, Mrs. Average Citizen, I suppose that there is no violation of the law because you made the preparation and it was not sold, but if I had added the rubbing alcohol to the Tincture of Iodine and sold it to you I could have been prosecuted under the law."

"You see, what I suppose Rachel was driving at was

(*Continued on page 369*)

EYE PREPARATIONS

ALTHOUGH the "windy" and the "dusty" months create possibly the greatest demand for certain eye preparations, the group as a whole represents "big, all-year-round numbers."

Collyria—The mucous membrane which lines the eyelids and covers the front part of the eyeball, the *conjunctiva*, is one of the most sensitive mucous membranes of the human body. Only very mild preparations are acceptable as general applications to the conjunctiva, and manufacturers should keep in mind the work of Macht and others which demonstrated that this membrane may absorb certain soluble and diffusible drug agents.

The most used of the eye preparations are the *collyria*, popularly known as "*eye lotions*," "*eye washes*," and "*eye drops*," solutions which may be conveniently applied to the conjunctiva by means of an "*eye-dropper*," or employed for the more thorough bathing of that structure by the use of the "*eye-bath*" or "*eye-cup*." Eye lotions may be used also by irrigation ("eye douches"), and as wet compresses placed over the eyelids.

Eye compresses, however, should not be used in infections of the conjunctiva because closure of the eyelids promotes retention of secretions and the multiplication of bacteria. Compresses are contraindicated also in eczema of the eyelids. The "natural cleansing bath" of the conjunctiva is the secretion of tears together with the opening and closing of the eyelids. When a compress is used, a simple emollient salve should be applied first to the eyelids in order to avoid maceration of these parts.

In general, eye lotions should be isotonic with the tears; for example, 1.4% of sodium chloride. An aqueous solution containing 2% of boric acid is practically isotonic in this application. A 1-1,000 solution of zinc sulfate has such a low osmotic tension, that it is necessary to add practically the same amount of boric acid or of sodium chloride to such a solution.

Boiled distilled water, sterile potable water, and camphor water are the most satisfactory vehicles for eye lotions. Rose water and the other flavoring and aromatic waters are usually unsatisfactory because of their frequent contamination with active bacteria and molds. Alcohol, unless highly diluted, is irritating to the eyes. Oily solutions do not spread well over the water-covered surface of the conjunctiva, although oily solutions of certain alkaloids are used in medicine at times to insure slow and prolonged action.

Obviously, collyria must be free from solid particles, which would mechanically irritate, and they should be sterile. The addition of a preservative, such as boric acid, is at times desirable.

Manufacturers' directions for using eye lotions are not infrequently too brief. In the first place the lotion should be warm when used. To insure the effects of a collyrium on the conjunctiva of the lower lid, if an eye dropper is used, the head should be thrown backward, the lower lid drawn down gently, and several drops of the solution deposited on the conjunctiva of the lower lid, while the eye is turned upward. Touching the membrane with the dropper should be avoided. The eyelids are then closed gently. If the upper membrane is to be treated, the upper lid is drawn away gently from the eyeball by pulling the lid upward, while the eye is turned downward, and several drops of the solution are applied to the raised margin beneath the eyelashes.

When the eye-cup is used that container should be filled with the warm solution, and applied to the region of the eye while the head is inclined downward. The head is then thrown backward and the eye is opened. After a few minutes, the head is again brought downward, and the eye-cup removed.

Collyria may be classified according to the effects produced; viz., *Cleansing Lotions*, such as a 2% sodium borate solution or a 1% solution of sodium bicarbonate; *Astringent Lotions*, as illustrated by ¼ to ½% solutions of zinc sulfate, which should not be used indiscriminately; *Antiseptic Lotions*, for example, 1 to 2% solutions of silver nitrate; *Local Anesthetic Lotions*, like a 2% Butyn solution; *Vascular Lotions*, epinephrine, dionin, etc.; and *Mydriatic and Myotic Lotions*, atropine, physostigmine,

By

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PHOTO EWING GALLOWAY

etc. The last three classes are without the scope of this article.

Ophthalmic Powders may be dusted on the conjunctiva from a cotton applicator or a camel's hair brush; and *Ophthalmic Disks*, which are minute gelatin disks containing such drugs as atropine, physostigmine, etc., are at times used in the place of eye lotions.

Ophthalmic Salves, for example, a 1% ointment of yellow oxide of mercury used in the treatment of styes, are applied to the margin of the eyelids, and are preferred in certain chronic eye conditions to insure more prolonged action. Simple salves, such as boric acid ointment, cold cream and petrolatum, will suffice as applications to the margin of the eyelids of discharging eyes to keep the eyelids from sticking together over night.

Salves should be applied by pulling down the lower eyelid by downward pressure on the cheek, and applying the salve to the margin of the lower lid by means of a small absorbent cotton applicator. A good vehicle for ophthalmic salves in general is a mixture of from 10 to 20% of hydrous wool fat with petrolatum. The lanolin favors the adhesion of the salve to the conjunctiva.

Eye Creams and *Eye Oils* are used to soften the wrinkles, "crowsfeet," around the eyes. Some of them contain so-called "nutritives." Perfumes used in preparations of this type should be very mild and non-irritating. Vitamin concentrates, especially vitamin A, are newer ingredients of eye creams and oils. Eye oil is preferred by some as an application for the eyelashes and brows. Balsamic odors are usually employed in quantities just sufficient to make the product slightly aromatic.

Type formulas are appended below.

Boric Acid and Salt Eye Lotion

Boric Acid	1.3 parts
Sodium Chloride	1.3 parts
Camphor Water	60.0 parts
Distilled Water, enough to make	120.0 parts

Boric Acid and Borax Eye Lotion

Boric Acid	5 parts
Sodium Borate	5 parts
Camphor Water	25 parts
Distilled Water, enough to make	100 parts

William's Eye Lotion

Sodium Borate	2 parts
Camphor Water, enough to make	100 parts

Astringent Zinc Eye Lotions

Lotion A

Zinc Sulfate	0.12 part
Distilled Water, enough to make	90.00 parts

Lotion B

Zinc Chloride	0.12 part
Distilled Water, enough to make	90.00 parts

Lotion C

Zinc Salicylate	0.06 part
Camphor Water	30.00 parts
Distilled Water, enough to make	60.00 parts

Lotion D

Zinc Sulfate	0.2 part
Boric Acid	2.2 parts
Camphor Water	25.0 parts
Distilled Water, enough to make	100.0 parts

Lotion E

Zinc Sulfate	0.35 part
Crocated Tincture of Opium	1.00 part
Distilled Water, enough to make	100.00 parts

Lotion F

Zinc Sulfate	0.05 part
Boric Acid	1.60 parts
Sodium Borate	3.20 parts
Glycerin	5.00 parts
Camphor Water	25.00 parts
Distilled Water, enough to make	100.00 parts

Lotion G

Zinc Sulfate	0.5 part
Ammonium Chloride	0.2 part
Camphor	0.2 part
Crocus	0.1 part
Alcohol	7.0 parts
Distilled Water, enough to make	100.0 parts

Tannic Acid and Borax Eye Lotion

Tannic Acid	2 parts
Sodium Borate	2 parts
Glycerin	12 parts
Camphor Water, enough to make	100 parts

Alum and Boric Acid Eye Lotion

Alum	0.4 part
Boric Acid	2.0 parts
Distilled Water, enough to make	100.0 parts

Ichthyol Eye Lotion

Ichthyol	1.8 parts
Distilled Water, enough to make	90.0 parts

Romershausen's Eye Water

Compound Tincture of Fennel	16.5 parts
Distilled Water, enough to make	100.0 parts

Zinc Eye Salve

Zinc Sulfate	0.7 part
Hydrous Wool Fat	10.0 parts
Petrolatum, enough to make	100.0 parts

Collargol Eye Salve

Collargol	2.5 parts
Distilled Water	15.0 parts
Anhydrous Wool Fat	12.0 parts
White Petrolatum	70.5 parts

Perfume as preferred.

Turtle Oil Eye Cream

Turtle Oil	20 parts
Olive Oil	20 parts
Castor Oil	10 parts
Lanolin	50 parts

Perfume as preferred.

Lecithin Eye Cream

Lecithin	5 parts
Cholesterol	1 part
Lanolin	10 parts
Yellow Wax	25 parts
Expressed Oil of Almond	50 parts

Perfume as preferred.

Eye Oil

Castor Oil	25 parts
Expressed Oil of Almond	75 parts

Perfume as desired.

Anesthetic Plucking Cream

Ethylaminobenzoate	1 part
Cold Cream Base	99 parts

It is recommended that this cream be rubbed in well and left for thirty minutes before plucking the eyebrows.

Eyelash Pomade

Peach Kernel Oil	18 parts
Paraffin	11 parts
Petrolatum	71 parts

Eyebrow Lotion

Sodium Chloride	6.0 part
Ammonium Chloride	1.0 part
Camphor	0.5 part
Alcohol	24.0 parts
Distilled Water, enough to make	400.0 parts

Eyelash and Eyebrow Softeners

Expressed Oil of Almond	60 parts
Castor Oil	20 parts

Perfume as preferred.

Diglycol Laurate	100.00 parts
Glacial Acetic Acid	0.25 part
Liquid Petrolatum	200.00 parts

Perfume as preferred.

Yellow Wax	20 parts
Cocoa Butter	30 parts
Peanut Oil	75 parts

Perfume as preferred.

Eyebrow Pencil Base

Soft Paraffin	40 parts
Hard Paraffin	42 parts
Color, or as desired	18 parts

Eyebrow Pencil

Yellow Wax	10 parts
Paraffin	30 parts
Cocoa Butter	30 parts
Petrolatum	10 parts

Carbon Black, a sufficient quantity.

Turtle Oil Eyelash Darkener

Petrolatum	50 parts
Turtle Oil	50 parts

Perfume as preferred.

Eyelash Darkener

Paraffin	1 part
Castor Oil	49 parts
Petrolatum	50 parts

Perfume as preferred.

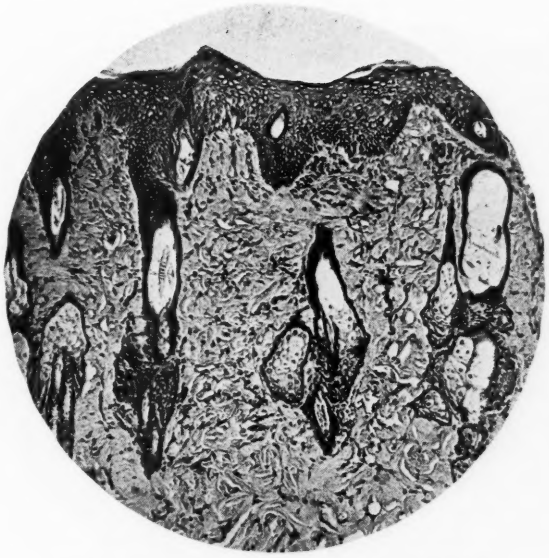
Eye Shadow Base

Yellow Wax	1 part
Paraffin	2 parts
Lanolin	2 parts
Petrolatum	1 part
Mineral Oil	5 parts
Perfume Oil	⅓ part

(*Continued on page 369*)

SULFUR IN COSMETICS

By RUDOLPH REBOLD, M. D.



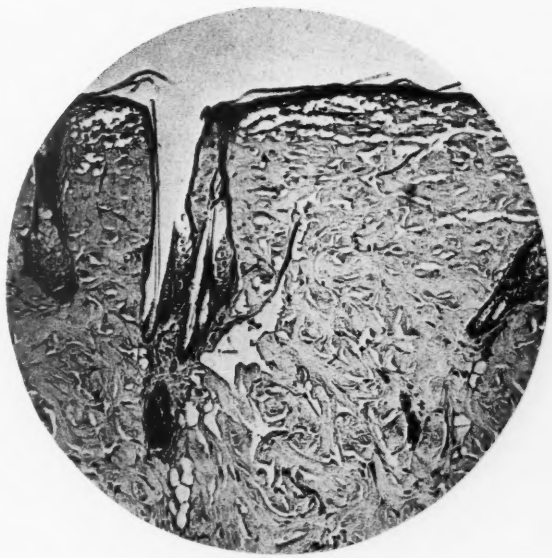
Skin section from a skin treated with metabolic sulfur.

THROUGHOUT the history of medicine, sulfur has been credited from time to time as a most valuable and interesting element in the treatment of a great number of diseases. Most attempts with the use of sulfur, however, were very limited or had to be given up altogether because secondary reactions due to the sulfur generally negated the beneficial effects. In the mineral (flowers of sulfur or colloidal sulfur) form and in the form of thio-acids and mercaptans, sulfur is toxic and irritating; in the cyclic form it is useless for body build-up (because a cycle has to be detoxicated in the body by sulfur compound in the form of a sulfate) and in the form of sulfates it is also useless because the body can only oxidize but never reduce any compound.

From this it follows that success in sulfur therapy is predicated upon the finding of a non-toxic, non-irritating, metabolic sulfur compound.

In studying the sulfur metabolism of the human system, particularly in its relation to arthritis (being convinced that arthritis is substantially a sulfur deficiency disease) I was faced with the difficulty of finding an "available" sulfur for intravenous injections. The nearest approach to metabolic sulfur appeared to be the colloidal sulfur preparations on the market, yet, after working with them, I became convinced these colloidal sulfurs merely provoke reactions of the general foreign protein type but that in this form they are neither specific nor can they be absorbed and utilized by the human body.

After making a long series of sulfur compounds, I finally found one which seemed to have merits. It is a straight-chain, unsaturated sulfur aldehyde which, following physiological tests, proved to be non-toxic, non-irritating and metabolic. (The sulfur being at its lowest oxidation state has a chance to be completely oxidized and utilized by the body.) This compound has been used intravenously over a period of four years on over six thousand arthritic patients with remarkable clinical results. Laboratory data indicate that parallel with the clinical improvement the sulfur content of the body



Skin section before treatment showing poor cell construction.

increases as evidenced by an increased cystine content and decreased brittleness of the finger nails. (Arthritic patients have a typically low content of cystine, a sulfur amino acid, in their finger nails)*. This work is going forward continually. Two announcements have already been made before medical bodies and patent application has been filed for an "arthritic specific."

During the study and observation of the patients on this new sulfur therapy it was noticed that the general aspect and texture of their skin improved strikingly well and it was this observation that led me to investigate what results the new sulfur compound would have if applied directly to the skin, as compared to the results obtained by intravenous methods. Thus the reason for this article, the role of metabolic sulfur in cosmetics.

In dermatological literature it is interesting to observe the ever-recurring advocacy of sulfur in some form or other as a skin tonic or specific. As mentioned before, however, all these known sulfurs and sulfur compounds have detrimental secondary reactions such as the formation of acid and the development of toxicity, irritations and idiosyncrasies.

The system which satisfies both chemically and biologically the conditions with respect to the nature of the chemical processes regulative of cell proliferation equilibrium is expressed in the Law of Mass Action, which states in essence that the progress of a reaction is regulated and brought to an equilibrium by the products resulting from the reaction itself.

F. S. Hammett (Protoplasma 1930 Vol. XI No. 3) has established the postulate that the sulfhydryl group is the essential chemical group specifically regulating biological growth; that when it is precipitated out in living material by Ph-ions, cell division stops, only to continue again when the group is resupplied and the acceleration of cell proliferation is induced in lower and higher plants and animal forms, including man, by the addition of sulfhydryl groups in physiological concentration to living things. These cumulative data demonstrate the biological universality of the specificity of the reaction.

Physiological adjustment, or homeostasis (assimilation of nutrient material) in biological growth therefore points definitely to sulfur in some form or other as a specific and, for lack of a better term, I will call this sulfur "metabolic" or "assimilable."

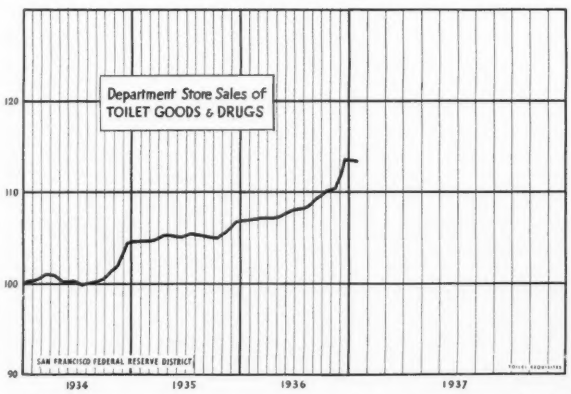
Through step-by-step experimentation it was found that metabolic sulfur is stimulative specifically of cell division. Through similar intensive experimentation it was found that the partially oxidized reaction product derivatives of metabolic sulfur are retardative specifically of growth by increase in cell number. Both the reduced and sub-oxidized states of sulfur are natural components of living protoplasm, and living protoplasm induces the change from the reduced stimulative to the sub-oxidized retardative state. This clean-cut establishment of the chemical-biological principle of growth regulation with metabolic sulfur opens up countless paths for explorations in the cosmetic field, using the metabolic sulfur as an adjunct to creams in skin hygiene.

Surface applications of metabolic sulfur naturally depend to a large extent on a suitable medium or vehicle to carry it into the skin. In collaboration with Henri Coutinho, eminent cosmetic chemist and specialist, we developed a line of biological emulsions and creams, especially formulated to carry the metabolic sulfur into the skin.

Clinical experiments over a period of two years with metabolic sulfur emulsions are very interesting indeed. First of all, tests were carried out on normal skins and it was found that the metabolic sulfur creams are entirely free from irritating effects either locally or systematically. The application usually is followed by a slight feeling of "glow" but there is no evidence of hyperemia. The skin stays of the same color and in no instance is application followed by edema or erythema. The physical effect to the individual was such that the cream could be left indefinitely on the skin, being in no way unpleasant either to the touch, smell or sight. One of the most typical characteristics of metabolic sulfur is that it never leaves any decomposition odors.

A large number of young women volunteered for further trials. The cream was given to them without comment, simply with the recommendation to use it as a beauty cream as best they saw fit. The consensus of opinions of these test subjects was that "it does something to the skin" which they all seem to like very much. An unbiased observer could readily see a definite improvement in the general aspect and texture of their skins.

Using a stronger titer of metabolic sulfur in a cream, tests were made on abnormal skins. It was found out that therapeutically the cream had merits in the local treatment of seborrhea, mostly of the dry variety. Also in seborrhea associated with acne, particularly of the climatic type. As a control locally it is very useful on psoriasis and on pruritus.



Department store sales of toilet articles and drug sundries in the San Francisco Federal Reserve District were 2 per cent less in January 1937 than in the same month of the previous year. Sales were 3 per cent greater in Los Angeles, 9 per cent less in San Francisco and 2 per cent greater in the Pacific Northwest.

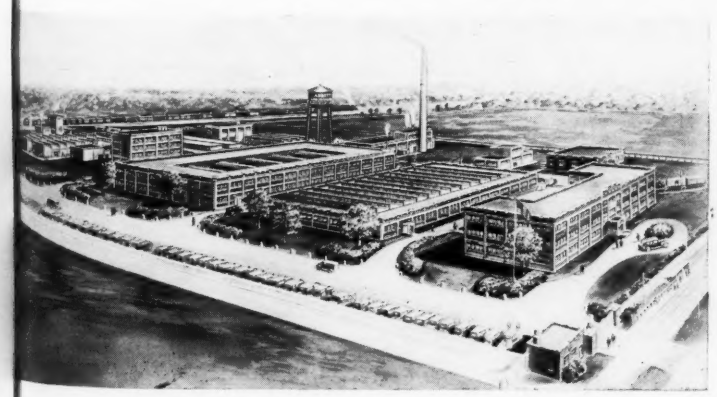
*M. Sullivan, Journal Bone and Joint Surgery, 1934, Vol. 132, p. 185-186.

FACTORY CONSTRUCTION

By FRANCIS CHILSON

A good deal of new construction is being projected or is actually under way in the trade and it seems opportune to discuss some of the problems that should be considered before one stone is laid upon another. At the outset it may be said paradoxically that architects can decorate and build buildings but they cannot design them. By "design" we mean to select the type of structure best suited for the purposes of our trade. When one realizes that they must create and supervise the erection of buildings for every conceivable purpose from dwellings to monuments and from slaughter-houses to cosmetic plants, it is unreasonable to suppose that architects can know as much about the processes of every industry with which they come in contact as the people who have spent their lives in it. If the architect is given intelligent help; if he is shown why a particular type of structure is more suited to the purposes of this trade than any other, the resulting building is certain to be suitable in every sense.

Most of the existing old buildings in the trade and many of the new ones were designed by architects. The result is that we can say without exception that we have never been in a drug plant entirely suited to its purposes. And we have visited a great many plants indeed. Generally speaking the inadequacy of the new building is not noticed at first, perhaps not for many years. Presently along comes a time when departments have grown out of bounds and the plant must be expanded. Then the pinch comes and we begin to realize the need for the things which should have been provided for in the construction of the first unit. Or, perhaps, we don't realize it right away because we have bought a lot of land, so we stick up another building anywhere. The process continues until at last we have a disintegrated hodgepodge of buildings on our hands, which become more progressively expensive to maintain and to manage. A great deal of our professional work comes to us because of the necessity to co-ordinate and integrate plants which have become with the passage of time hopelessly disintegrated. In one such instance recently a hundred thousand dollars had to be spent to bring order out of chaos, and quite needlessly, too, if someone had only realized that after all a plant is nothing but a big production machine, the operating cost of which depends upon the smooth working of its component parts.



Above is shown a multi-story drug plant, and at the lower left is shown a one and two story plant.

We are engaged in a trade in which the bankruptcy of an established firm is virtually unknown. It is a trade in which sound enterprises grow steadily, some of them with amazing rapidity. It may safely be assumed,

therefore, no matter how humble an enterprise may be when it builds its first two by four plant, that it will grow more or less rapidly, and that the time will inevitably come when that first building must be expanded. We are omitting of course those enterprises which begin in rented quarters and must perforce take what can be had for a price. The history of the trade clearly tells the manufacturer that if he has sound products, soundly merchandised, he can look forward to the necessity of expanding his plant at not too infrequent intervals.

For some strange reason manufacturers rarely seem to realize that their business will grow steadily and that it is very likely to undergo a multiplicity of changes in its character. The usual procedure in building a new plant is to provide a hundred per cent. increase in space and as much more as the purse will allow. But the availability of that space, its type and location are all too frequently given inadequate thought. These two premises:—that the business will grow to a point where expansion of plant will become necessary, and that changes in the character of the product are virtually inevitable, should be kept constantly in mind when a new building project is under consideration.

The next vitally important premise must be based on the realization, that, stripped to its essence, all production is a process of handling materials. Materials arrive at the plant in one form and leave it in another. But the fact is that, from the time of arrival to the time of departure, the materials are subject to a more or less constant succession of handlings. Usually we think of handling only in terms of trucking, conveying, pumping, etc. The rest of the process is called warehousing, manufacturing, packaging, shipping. But it is all material handling nonetheless. The materials must be moved from point to point as they pass through successive stages of conversion until at last as finished products, they are stored for shipment. If a barrel of chemical could be dropped inside the door of the warehouse and left there undisturbed until it was picked up for shipment, we should have an example of material handling reduced to it lowest possible point. But that is not what happens. The barrel is put on a truck, moved to a storage point and left there until wanted. Then it is taken again moved to a point in a manufacturing department and dumped into a mixer. Other materials may be added and the mixture is dumped and conveyed to a second processing point. This process of rehandling continues through all the stages of manufacture and packaging until finally it arrives in the stock room where it is stored against future shipment, at which time it is handled again through the order checking and shipping stages. But it is all a process of handling as we have said, and final costs depend upon whether the handling is done mechanically, manually or by gravity, and also upon the frequency with which materials are moved from point to point. We are omitting other processing costs like steam, power, etc., because these costs are influenced, if at all, only to a negligible degree by the construction and layout of the building.

We are laying very strong emphasis upon manual handling costs because such costs are definitely controllable and the size, type, construction and layout of the factory building provide the means by which they can be kept at a minimum. We once had a hell of an argument with a manufacturer about the location of a stockroom. He stoutly maintained that a proposal we made to him to relocate his finished stock room nearer the packaging points, would save him nothing since in either case, trucks had to be loaded in the packaging point and unloaded again at the stacking point, and the movement of materials for a few hundred extra feet wasn't worth considering, because he had to have the men anyway and they might as well be doing that as nothing.

When, however, we reduced the labor cost of moving the trucks to a per foot basis and when the difference in handling time per truck was multiplied by the production of the previous ten years, it was found that the neat little sum of sixteen thousand dollars had been wasted in the intervening time.

The argument that "we have to have the men around anyway" frequently bobs up and convincing reasons are advanced as to why it is necessary to have these men around. But rarely is it appreciated that with proper layout in properly designed buildings it would have been unnecessary to have the extra men around. Take the case of running a still for example. A still wants watching if it is to be operated economically, especially if the extract is foamy. Place the stills very close together and one man can run several of them simultaneously. Place them fifty feet apart (and this very often happens) and you will have to have an additional man or two to run them. The difficulty is that extra handling costs are never evident, being buried in the general cost figures and taken as inevitable and irreducible.

But when it is realized that handling costs are directly influenced by the design of the building; when we know that the plant will certainly have to be expanded and that provision will have to be made for the manufacture of products not included in the original list at the time the building is to be built, a condition of awareness will have been created that will be of immense help in selecting the type of building to be employed.

With this in mind we give attention to the business as a whole. It is at once perceived that it segragates itself sharply into distinct major divisions which only are indirectly related to each other. Warehousing is one, manufacturing or conversion a second, packaging a third, finished stock and shipping a fourth, general offices a fifth, laboratories a sixth, service departments a seventh. Within these there are of course more or less numerous subdivisions, many of which, depending upon the products, are totally unrelated.

Of these major divisions of the business, it is at once seen that only four of them are concerned with the physical handling of the product, warehousing, manufacturing, packaging, finished stock. The offices, labora-

tories and service departments never have anything to do with the physical movement of the materials. Therefore we are able to derive our first design principle:

Offices and laboratories and service departments should never be placed in a situation where they will present an obstacle to the straightforward flow of materials, either at the present or in the future.

Usually these non-productive departments are everywhere but where they should be. Because of supervisory functions these divisions cannot be too remote from the plant, so therefore, the sensible thing is to place them above the plant; to place them to one side where they will never interfere with expansion, or even below it. With air conditioning, sound proofing, and illumination as advanced as they are there is no longer any reason why offices, laboratories and service departments should not be located in the basement. As a matter of fact in the hotter parts of the country it is an advantage to have them there. At all events the usual practice of placing the offices in the best possible space regardless of interference with the flow of materials and the future expansion of the plant is a mistake which must be paid for dearly in higher costs. In placing these departments, however, it must be remembered that they, too, will have to be expanded and provision should be made for it.

Before deciding upon the type of structure that will best suit production purposes it is well to use as a yard stick a device we have called a "nuclear unit." A nuclear unit is the space required to conduct a unit operation. A nuclear unit for packaging operations is a space twelve and one half feet wide and seventy feet long. Two nuclear units should be provided for each bay. This means that columns should be spaced on twenty-five foot centers. The usual spacing is inadequate. Fifteen feet is too wide for one packaging line, not wide enough for two. Two lines can be squeezed into twenty feet but an insufficient amount of space is left for service trucking aisles between the lines. This is the condition generally found in drug plants. The bays are too wide for one line of equipment or packaging tables; not wide enough for two. A nuclear unit for manufacturing operation is more difficult to define, but for average purposes a space six by ten feet suffices for one unit operation although many unit operations require a multiple of this amount. These units are empirical only and serve only as an index of measurement for spans and major areas until a detailed layout can be made. The proper plan of procedure is to provide for the expansion of each of the major divisions without disintegrating them and to maintain floors at a constant level.

Now we are ready to consider the type of structure. We have heard a lot about the benefits of gravity and the merits of single story versus multi-story. In our opinion a multi-story structure has little to commend it, as true gravity flow exists in theory only. It is only when a company is the owner of a very expensive plot of land that cannot be got rid of that a multi-story structure should be employed. Labor is no longer a problem, modern transportation is taking industrial plants out into the country.

There is one exception, however, that applies in a few cases and this exception will be discussed below.

The theory of a multi-story structure is that it provides gravity flow, which necessitates beginning operations at the top and flowing downward. It's a fine theory until one begins to check it carefully. Then we find that many operations are one floor operations by their very nature: tablet and pill making, ointment making, suppository making etc. Where's the economy in carrying materials in trucks up to the third or fourth floor only to carry the finished stock down again the same way? In the making of powders the weight that comes down by gravity must first go up in barrels as nothing is added to increase weight in the processing. Pumping equipment, conveying equipment and other handling equipment has been improved in design to a point where it is becoming easier and easier to clean, thus removing a former objection to its use.

The reason why gravity flow appeals to many unthinking people is due to the fact that they have never seen a plant with adequate head room. The usual heights of ten, eleven and twelve feet are too low for drug purposes. When a plant has adequate headroom, equipment can be set up with loading mezzanines, thus achieving the benefits of gravity while bringing the equipment closer together and making it easier to operate and to supervise. When workers must go from one floor to another to attend various phases of an operation, a certain amount of traveling time is required and an excellent opportunity to loaf on the way is presented.

The gravity theory bogs down when it is considered that, to achieve it in an ideal sense without any interim lifting or handling, while the materials are in process from operation to operation, would require, in a few cases, buildings ten stories high. Gravity presupposes a very large volume of a particular product. When volume is lacking, to attempt to employ gravity is to disintegrate a process and in the end to increase its cost. To shorten the distance, or in other words to integrate a process, is to insure simplicity in supervision, save labor and minimize waste of materials.

If we know the drug business, this means a one story plant with adequate headroom, in which processing equipment can, in the few instances when it is necessary or economical, be tiered or staggered, and in which labor can be made more productive by closer supervision.

However, in the case of very large plants, there is as mentioned above an exception. To keep such plants at ground level spreads them out over so much territory, that the great distance materials, especially in small lots or batches, are forced to travel automatically offsets the disadvantages of having them go upward. Then it becomes desirable to utilize two and in extreme cases three stories. If we keep in mind that accessibility, distance and volume are the factors that influence handling costs, we shall not go far wrong in selecting a type of building.

PHOTO COURTESY STAFFORD ALLEN & SONS

DIGITALIS

It was in 1775 that Dr. Cawley, the Dean of Brazen Nose College, Oxford, was "cured of the dropsy." The new medicine that worked this wonder and prolonged the life of the good Dean was called foxglove. It was the discovery of young Dr. William Withering, one of the junior members of the staff in the hospital at Birmingham.

It didn't take long before other doctors began to evince an interest in foxglove which eventually became known as digitalis, and as such made its appearance in the Edinburgh Pharmacopoeia in 1783.

In 1785 Dr. Withering published an account of his years of searching study with this drug, which work is still one of the classics of medical literature. It remained for Dr. Schmideberg, a famous German chemist, however, to discover that digitalis consisted of three active principals. These he called digitoxin, digitalin and digitalein.

In 1910 the second great name entered into the history of digitalis, when Dr. Hatcher introduced the cat method of evaluating the effectiveness of the great heart medicine. The next great name in the history of digitalis was that of Dr. Eggleston who established the scientific dosage of the drug.

Digitalis was first used to give strength to the failing heart, and today it is still the greatest medicine to tide the heart over a crisis. Digitalis has now been a recognized medicine for over one hundred and seventy years. It has grown in stature as the years went by until it attained recognition as the greatest of all heart medicines.

Digitalis or foxglove (Digitalis purpurea) is a fairly hardy European perennial. It is cultivated to some extent in this country. The plants do not flower until the second year, and it is necessary to cultivate them frequently during the growing seasons of both the first and the second year.

It was formerly supposed that the leaves were not medicinally active until the second year's growth, but it is now generally recognized that those of the first year's growth are equally as potent.

The extensive use of digitalis is indicated by the fact that although administered in very small quantities on account of its potency, more than 50,000 pounds are usually imported annually.

TESTED FORMULAS

THE market for deodorants, from an estimate based upon the U. S. Census of Manufactures, was approximately $3,800,000 (wholesale value) in 1936 and is no where near a saturation point, if a trip in a crowded subway train is any evidence. With a sound merchandising plan, at least as essential as a technically excellent product, sales in this field will result in healthy dividends.

Fresh perspiration may be almost odorless; stale perspiration is always unpleasant. The change is due to chemical action, probably caused by bacteria, and the odor is obviously due in part to the presence of some of the lower fatty acids. If these are present in the perspiration from the beginning, they will be immediately apparent. Deodorization may thus be accomplished by two methods: either by altering the malodorous fatty acids chemically or by checking perspiration entirely.

In the latter instance, a strong astringent, or protein precipitant, is used. Very concentrated alcohol, aluminum salts, formaldehyde, etc. are among the most effective compounds of this type; ferric chloride, also very active, is too highly colored to be of much use while chromic acid, occasionally recommended, is far too toxic to be used on the skin. These all act in substantially the same manner by primarily stopping the flow of perspiration and also exerting some antiseptic and deodorizing action. Because they are fairly drastic in action, they share the disadvantage of being irritating to many skins.

Deodorants which are not astringents can act in two ways: by neutralizing odorous acids or by exerting an antiseptic effect, thus preventing bacterial decomposition which leads to odors. Zinc oxide is a very good example of the first type of action (combined with some astringent effect) while precipitated chalk and other acid-neutralizing compounds are useful. Boric acid, although not noteworthy for high antiseptic action, is widely and effectively used in deodorant preparations. Zinc peroxide, utilized in one of the tested formulas, is a white powder, very similar in appearance to the oxide, and has strong bleaching and oxidizing properties. It is unstable in the presence of water and must therefore be used in non-aqueous bases. It acts to destroy odor-producing compounds.

Deodorants can be marketed in the form of liquids, powders, creams, salves, or sticks, only the last three requiring definite formulation.

The powders are in general simplest to make and least effective and acceptable. Using talc, or mixtures containing colloidal clay, precipitated chalk, etc. as the base, zinc oxide or peroxide, boric acid, alum, are incorporated in the base. A certain proportion of zinc or other metallic stearate is a useful addition for increasing adhesion. Mixing must be thorough and the powder must be free from lumps and obvious grittiness. Nevertheless, the powder need not be as fine as face or even body powder if this involves too elaborate processing. The powder can be readily applied by means of a puff but when casually applied it is not likely to cover an area completely and prevent the passage of all odor.

Liquid preparations still hold a large part of the market despite the fact that they are less convenient to apply than creams or sticks. For the most part they are of the strong astringent type, being more or less concentrated solutions of aluminum salts. Aluminum sulfate, if used, is always to be preferred to the various alums since it is the aluminum ion, not potassium, sodium, ammonium, etc. that is the active astringent. Aluminum chloride should not generally be used because the hydrochloric acid liberated by hydrolysis disintegrates cloth with which it comes in contact. Aluminum acetate solution and aluminum sulfate are to be preferred and may be used in concentrations up to 25 per cent. One per cent. of boric acid is useful in helping to keep the solution clear. Organic aluminum compounds, such as aluminum beta naphtholdisulfonate, are often recommended where solubility in alcohol is desired. Only small amounts of alcohol may be added to concentrated solutions of aluminum salts because of the insolubility of these salts in alcoholic solutions. Alcohol is useful in increasing the rate of evap-

DEODORANTS

By JOSEPH KALISH

Paste

Boric acid	15.0
Zinc oxide	20.0
Petrolatum	65.0

Cream

Glyceryl monostearate	20.0
Glycerine	10.0
Methenamine	5.0
Water	65.0

Paste

Hydrogenated oil	85.0
Basic aluminum acetate	15.0

Stick

Beeswax	20.0
Paraffin	15.0
Petrolatum	20.0
Mineral oil	35.0
Zinc peroxide	10.0

oration and providing a solvent for the perfume. Formaldehyde has been practically omitted from modern formulas because of its odor and the high incidence of irritation resulting from its use. Hexamethylene-tetramine, a compound of formaldehyde with ammonia, has some very interesting properties. It is a white, crystalline substance easily soluble in water and has no odor. When acted upon by acids, however, it breaks down into ammonia, which combines with the acid, and formaldehyde. In a deodorant, subject to the action of acid perspiration, the compound will partially break down to liberate formaldehyde. This exerts an astringent action to check further perspiration, acts as an antiseptic to destroy bacteria, and acts as a coagulant to destroy odors in perspiration. As soon as the flow of perspiration is lessened, the rate of breakdown decreases, so that formaldehyde is never in excess, being released only as needed. The compound has been used in a great number of cases without reports of irritation.

Salves and creams have much to recommend them and the three tested formulas given illustrate various combinations. The cream may be tinted, it must be smooth to the touch and must spread readily over the areas to which it is applied. Smoothness can be obtained only by grinding insoluble pigments or deodorants very thoroughly with the base to assure homogeneous, fine dispersion. Ease of spreading will depend upon two factors, namely, the consistency of the base itself and the proportion of solid material used. In the first formula, petrolatum alone is the base but the finished product is quite stiff because of the high proportions of boric acid and zinc oxide present. The product is primarily deodorant, not astringent.

Hydrogenated vegetable oil is a very fine base and in the second formula is used along with basic aluminum acetate. This is a softer ointment with definite astringent qualities. Since hexamethylene-tetramine or methenamine is soluble in water and unaffected in neutral or slightly alkaline media, it is made into a vanishing cream product with glyceryl monostearate. This combination has proven to be a very efficient deodorant which checks perspiration very little. The deodorant stick is softer than most lipsticks since a heavier coating is generally desired. An increased proportion of either beeswax, paraffin or both will, of course, make a harder product. A product of this type is about the ultimate in portability and ease of application but requires the most manipulation of the formulas given.

As always, these formulas have been given to provide a cross-section of the field and cannot illustrate all possible types of combinations. Virtually any water soluble deodorizing compound otherwise acceptable (nontoxic and stable) can be used in the form of a solution. Any compound may be used with practically any salve base since the absence of water assures the stability of water sensitive compounds and solubility does not

(*Continued on page 371*)

CLEANSING CREAMS FOR THE DRY SKIN

TREATMENT lines on the market today in general make a sharp distinction between preparations to be used for the dry skin and those designed for the oily skin. Thus we find for the dry skin, widely recommended and sold, all manner of nourishing or lubricating creams, containing a high percentage of vegetable and animal fats, to supplement the oily material not furnished in sufficient amount by the sebaceous glands. On the other hand, most manufacturers carry for the excessively oily skin various astringent, medicated, and drying creams and lotions, which in this case counteract the overactivity of the sebaceous glands.

We may truly say that of all the products in a treatment line the cleansing cream is the most fundamental, in a manner of speaking the keystone of the arch. It is used at least once, perhaps twice, each day by the customer, and without mild, yet thorough cleansing, all the other preparations used will fail to give their expected effect. Of especial importance and, perhaps somewhat neglected by many manufacturers, is the problem of the correct cleansing cream for the dry skin. It has often been said that 90% of American women suffer from excessive skin dryness, and for this large market, the manufacturer must be certain that his cleansing cream cleanses thoroughly without at the same time adding to the tendency toward dryness of such skins.

Our original cleansing cream many years ago was the old fashioned cold cream. It was hard and stiff and required much manipulation before it was sufficiently worked into the pores. This type brought about stretching and sagging especially in delicate fine pored skins and justly fell into disrepute. Later came the vogue of the quick liquefying cream, usually a perfumed mineral jelly, that is to say a mixture of paraffin, petrolatum, and mineral oil. These creams had the great advantage of liquefying rapidly at skin temperatures, giving rapid and good cleansing without the necessity of manipulation and massage. In fact the cleansing was too thorough for many skins. The solvent action of the cream on the dirt and oil in the pores was so excellent that it did too good a job. Dry skins felt this effect quite markedly. The resulting removal of natural fats aggravated the condition of a dry skin, and we find many women unable to use liquefying cleansing creams because of this drying effect.

A way of correcting this fault of liquefying cleansing creams is to have the cream contain substances which will constantly renew the fats and oils of the skin during use. Lanolin, absorption bases, cholesterol, lecithin, hormones and vitamin products have been combined with liquefying cleansing creams and shown to give excellent results with dry skins.

A better solution is to use another type of cleansing cream entirely. Two types are suitable, and both can readily be enriched by the additions of small amounts of lanolin or the other skin-fat allied substances described above. The two types to be described, I have called the soft cold cream and the liquefying emulsion cream. Since both types are W/O emulsions, the water they contain prevents the drying effect present in the true liquefying creams, which are without water.

The following formulas are basic working formulas for these two types of cream. Appropriate changes in the ingredients and proportions to alter the properties somewhat will readily suggest themselves to the investigator.

Soft Cold Cream

Beeswax	6.0
Paraffin	12.5
White petrolatum	8.0
Mineral oil	58.0
Water	15.0
Potassium carbonate	0.3
Borax	0.2

The waxes, petrolatum, and mineral oil are melted together and brought to 65°-70°. The water containing the potassium carbonate and borax in solution is run in at the same temperature. Stirring is continued until cool. After adding perfume, the cream is allowed to stand over night and filled by warming slightly until just liquid. If lecithin, vitamin products etc. are used,

By DR. MYRA AST

EWING GALLOWAY

these should be added dissolved in some of the mineral oil after the cream has been formed and has already come to a temperature of 35°-40°.

The above is a smooth, stable white cream of medium soft consistency, which liquefies fairly readily and makes an excellent cleansing cream for dry skins.

Liquefying Emulsion Cream

Beeswax	4.0
Paraffin	10.0
White petrolatum	10.8
Mineral oil	55.0
Water	18.0
Borax	1.2
Glycerine	1.0

The manufacturing procedure is the same as for the soft cold cream. This cream is a firm translucent cream, which liquefies very readily on the skin. It somewhat resembles a true liquefying cream in appearance and action, but is less apt to separate and at the same time is more suitable for a dry skin.

The characteristic feature of the liquefying emulsion cream is a high borax content. In order to prevent separation of borax crystals in cold weather, something capable of keeping the borax in solution must be present. Glycerine in above formula serves this purpose.

Potassium carbonate is utilized in the soft cold cream in place of potassium hydroxide because it has a somewhat milder alkaline reaction. Nevertheless, trouble may sometimes be caused by the liberation of carbon dioxide in the process, an aerated cream resulting. Stirring must be continued while the cream is still warm until all liberation of gas has ceased. Potassium hydroxide may be used in place of the carbonate, but the quantity should then be reduced to 0.1 part of the stronger alkali.

Both formulas are fundamentally similar, having substantially the same ingredients to serve the same purpose. Beeswax and borax (or potassium carbonate) act as the emulsifying agent to disperse water in the oil, paraffin, petrolatum mixture. Oil, of course is the active cleanser, petrolatum retards oil leakage, and paraffin stiffens the cream.

AMINOPYRINE

By M. A. LESSER

THROUGHOUT the ages man's fear of pain has been only slightly less than his fear of death. Where ever man has been, he has turned to his man of medicine for aid and protection. It is admitted that the most important function of the physician is the saving of life. Unquestionably his next greatest service is the relief of pain. For this latter task he employs many drugs, of which aminopyrine is one of the oustanding. Known variously as amidopyrine, pyramidon, pyramidone, amidoantipyrine; aminopyrine is an official drug of the U.S.P., is listed in the "Useful Drugs" of the American Medical Association and occupies a prominent position in the list of prescription chemicals of the St. Louis Drug Store Survey.[1] Two of its preparations, Elixir of Aminopyrine and Tablets of Aminopyrine are listed in the National Formulary.

Aminopyrine is a "coal tar" preparation, being a pyrazolon derivative. It is made by the methylation of amino-antipyrine. The chemical name of the substance so prepared is easier to read than to remember; 4-dimethyl amino-1, 5-dimethyl-2-phenyl-3-pyrazolone, but it does give the structure of the formula, $(C_6H_5N.CO.CN\ CH_3)_2.C.CH_3\ NCH_3$

Of the same group, and having similar action is the older drug—antipyrine. This chemical which is often an impurity of aminopyrine, is rapidly being replaced in therapeutics by the latter substance. Although aminopyrine acts somewhat more slowly than antipyrine, its action has a more lasting effect. Only about 1-3 as much aminopyrine is required to obtain the desired result, with less danger of toxicity. The average dose of aminopyrine is 0.3 gram or 5 grains.

Aminopyrine consists of colorless, or white crystals or crystalline powder. It is soluble in water and freely soluble in alcohol. This solubility in water is an important difference when compared with the similarly acting but more toxic acetanilid group. Aminopyrine melts at 107°-109° C. It is odorless, practically tasteless and stable in air.

Amidopyrine acts as an analgesic and anodyne for the relief and control of pain, as an antipyretic for the lowering of fever and as an antirheumatic for the prevention and treatment of rheumatism. The rapid action of the drug may be attributed to the fact that much of it is absorbed directly through the stomach, as shown by the fact that it appears in the urine within one or two hours. Aminopyrine does not cause variations in the resistance of the blood corpuscles, nor does it cause hemolysis—as has been shown in experiments on animals[2] nor do even toxic doses cause changes. However, amidopyrine does retard blood coagulation and decreases the coagulating components of the blood. It is believed that the drug may depress a controlling center in the mid-brain, especially since aminopyrine does have a general depressant action in this area. It is by this same action that pain is controlled.

When acting as any antipyretic, aminopyrine has little or no effect on normal temperatures, but reduces febrile temperatures to or below normal, according to the dose given. This fall in temperature is due to the increased heat loss, partly by cutaneous vasodilation, partly by the restoration of the water content of the blood.[3] Because of this action the drug is valued in such conditions as tuberculosis, pneumonia, typhoid, and scarlet fever. It finds extensive application in the treatment of the common cold.

The series of informative articles on official medicines running currently in the Journal of the American Medical Association, has in the section on Analgesics, shown the value of aminopyrine in the control of pain.[4] Here, Waggoner warns, "The indiscriminate and illogical use of analygesics if frequently unsatisfactory and may actually cause more damage than the pain itself." It must not be forgotten that analgesics satisfactory for one type of pain may be almost valueless in another case. Pain is an important factor in the diagnosis of a condition, but once having served its purpose as a warning and diagnostic aid, the pain should be relieved as soon as possible. Aminopyrine is prominent in this connection. The neuralgias, those treatment-resistant conditions, such as tic douloureux, a typical neuralgia of the face, intercostal neuralgias, postherpa-

tic neuralgia and sciatic neuralgia are best treated by the use of aminopyrine and the salicylic acid derivatives. In these distressing conditions, especially when chronic, morphine and its derivatives are contraindicated. Some cases that are not too severe may, by treatment with proper mechanical means combined with the above analgesics, eliminate the need for surgical intervention.

Neuritis, which differs from neuralgia in that neurological changes take place, is extremely painful. Because of this, the early treatment may require morphine or one of its derivatives. Quoting Waggoner further—"Since a great many of these cases are associated with toxic conditions, care must be exercised not to prescribe any medication that will increase the toxic manifestations. In cases of neuritis as in cases of neuralgia, mechanical therapy is valuable. As a necessary adjunct however, one should include the use of proper analgesics. The pain in most of these cases will yield fairly promptly to the use of aminopyrine."

Aminopyrine may be used, but is not considered very effective in root pains such as tabes dorsalis and spinal cord tumor. It is more effective in radiculitis, a painful condition caused by the inflammation of the nerve roots. The severe and almost untreatable spontaneous pain of thalamic diseases, may occasionally be treated with better results by combining morphine sulphate with aminopyrine, rather than by using large morphine doses. Aminopyrinebarbiturate combinations are not advised for the treatment of dysmenorrhea, that painful condition of women.

The sufferers from rheumatism are large users of aminopyrine. Many individuals are intolerant of the usual salicylate regimen. For these aminopyrine offers a valued alternate. In other cases, when the salicylates have proven ineffective after several days of treatment, this therapy is often abandoned and aminopyrine treatment substituted. A dose of the drug being given every hour or so until the pain is relieved. The time interval is then gradually increased.

Many of the preparations sold for the relief of headaches are composed solely of, or compounded with, aminopyrine. Other similarly composed products are employed for the relief of asthma, toothaches, stomach pains and the like.

The comparatively rare disease, diabetes insipidus resembles diabetes mellitus in that the patient has constant thirst and excretes large quantities of water. However, unlike diabetes mellitus, the sugar content of the urine is normal. Scherf[5] has shown that large doses of aminopyrine, not only decreased the thirst of these victims, but also lowered considerably the water and salt excretion. He recommended intramuscular injections of aminopyrine solutions for controlling thirst in other diseases. Aminopyrine also has an inhibitory effect on the diuresis, or increased urine flow, caused by such drugs as digitalis and the purines.

The combination of cocaine and some of its derivatives, propacocaine, beta eucaine and psicaine with aminopyrine increases the action of these drugs when used as local anesthetics.[6] This effect is created by increasing the absorption of the local anesthetic by the tissues through the action of aminopyrine, thus making it possible to use less of the major material to achieve the desired results.

Aminopyrine is compatible with many other drugs and chemicals including: antipyrine, acetphenetidine, ammonium chloride, borax, cinchophen, tannin, sodium and potassium acetates, sodium biphosphate, lead acetate, menthol, methylamine, phenolphthalein, potassium bromide, potassium iodide, sodium salicylate and cascara extract.[7] It may also be combined with acetanilid, boric acid and some of the barbiturates such as diallylbarbituric acid (dial) and diethyl barbituric acid (veronal). This last combination is a yellow powder and is known as Peralga. A blue color develops when aminopyrine is mixed with such oxidizing agents as iron chloride, silver nitrate, nitric acid, spirit of ethyl nitrite, iodine solutions and some enzymes. It becomes yellow when combined with aspirin or salol. It forms a grey mass with calomel, and gives a purple color to pepsin solutions. It cannot be moistened to form tablets because the substance becomes pasty and sticks to the die. However, it can be molded by pressure. It is incompatible with amyl nitrate and apomorphine. Aminopyrine forms a paste when mixed with citric acid. The very valuable combination of acetyl salicylic acid (aspirin), aminopyrine plus other drugs is capable of causing internal irritation if the mixture has been exposed to moisture. The acetyl salicylic acid breaks down to form acetic acid and salicylic acid which are gastric irritants in many cases. If however, starch is added to the mixture before being encapsulated, the moisture reaction should not take place.

In about 1930 the medical profession began to note untoward physiological effects after aminopyrine dosages on certain individuals. It was found that aminopyrine therapy, like so many of the newer and effective analgesics, is attended with certain dangers. The American Medical Association sums up the situation briefly—"Granulocytopenia has followed the use of aminopyrine, and the administration of aminopyrine should be stopped if skin eruptions, dizziness or chill occurs. Unusual sensitivity, fatigue, menstruation, are factors in the toxicity".[8]

It was F. W. Madison who first connected this condition with aminopyrine before the Central Society for Chemical Research in October 1933. Granulocytopenia or agranulocytosis is a condition of the blood in which white cells are reduced from a normal average count of 7,500 cells per cubic millimeter to below 2,500. The count is often 1,000 or less. Particularly effected are the neutral granular white cells—the major factors in the resistance of the blood to bacterial infection. These are greatly reduced in number and a similar reduction takes place in the blood forming sections of the bone marrow. This is followed by a loss of cellular resistance and this in turn, followed by infectious processes of various types. Attempts to produce the disease with injections of bacteria isolated from the blood of agran-

ulocytosis sufferers have generally failed.[9] It is now generally believed that sepsis is the result rather than a cause of the disease.

The disease, if it is such and not a syndrome common to many pathological conditions, affects women about 3½ times as often as men. This is probably due to the fact that women use much medication for the treatment of periodic pains. Agranulocytosis occurs most commonly in mid-adult life, no cases have been reported in children under ten years.

Agranulocytosis is frequently fatal. If aminopyrine is the causative factor in this condition, it should be placed under the most rigid medical control. But the entire subject of agranulocytosis and its etiology is a highly controversal one. Jackson and Parker[10] admit that aminopyrine and similar drugs "may and probably do have much to do with the development of certain cases." Since the number of cases of agranulocytosis has been steadily increasing for the past few years, a review of this condition and its causative factors as now known, is in order. If aminopyrine and similar compounds are believed the causative agents, a large group of highly valuable drugs will be ruled out of use. Agranulocytosis has been attributed to such drugs, aside from aminopyrine, as antipyrine, dinitrophenol, acetphenetidin, acetanilid, acetyl salicylic acid, quinine, gold salts, ortho-iodoxybenzoate, neosalvarsan and the barbiturates. Vaccines are also indicted.

Assuming for the moment that aminopyrine and its allied drugs are the causative agents of agranulocytosis, what part of the chemical structure is responsible for the toxic action? Early investigators blamed this effect on the benzene ring, found in one of the side chains of the aminopyrine formula. It was pointed out that workers exposed to large quantities of benzene do get benzene poisoning but no cases of agranulocytosis are reported. The benzene ring as a causative factor has been fairly well eliminated. Herz[11] considers the NH component of the pyrrol ring as the toxic element, regardless of whether the H is replaced by another radical such as phenyl as in amidophrine. Others consider the benzene ring and the radicals in combination as the poisoners. The exact causative group, if any, is as yet undetermined.

It seems strange with the large quantities of aminopyrine being annually consumed for the relief of pain and other ailments, that many more sufferers from agranulocytosis are not found. Just why some should be susceptible and others go unscathed, even with large doses of the drug, is another moot question. Attempts to create the condition by feeding, in animal experiments, were on the whole unsuccessful.[9] It is uncertain whether the disease is a result of an allergy or anaphalaxis. Some authorities believe agranulocytosis comes to individuals who have developed an allergic or anaphylactic hypersensitivity to aminopyrine. It is certain that persons who have recovered from agranulocytosis are extremely sensitive to the drug. In such, a small dose is capable of reducing the white blood count to far below normal. Such individuals must, of course, guard against taking aminopyrine. Persons who are not so susceptible cannot get the disease even with large doses. There is no absolute test for sensitivity to this material. Blood counts before and after taking the drug are extremely helpful as are skin patch tests using a 10% solution of the drug in the determinations. It is advocated that when large doses, or continued small doses are given, frequent white blood cell and differential counts be made.

That aminopyrine and its associated drugs are not the sole etiological factors of this blood condition is best illustrated by a study of a report of 36 cases of agranulocytosis. In 13 of these cases aminopyrine or its allies had been taken, yet in 15 cases there was definitely no history of such therapy. Similarly in an analysis of 27 cases where complete and unequivocal data relative to medication was at hand, it was found that only in 7 of these cases could the disease be properly regarded as directly traceable to the administration of these compounds. As Jackson and Parker[10] state, "It has been pointed out that the drug may be taken in considerable amounts prior to the onset of the disease yet on careful analysis it may appear that it is of no etiological importance whatsoever. The 'post hoc ergo propter hoc' argument is notoriously fallacious."

In one case of agranulocytosis, occurring before the relationship between the disease and aminopyrine was suspected, one patient was given large doses, totalling 370 grains, for the relief of a very painful condition. This patient was negative to the aminopyrine patch test and has taken 15 grain doses of aminopyrine since recovery without changing the white blood count for the worse.[12]

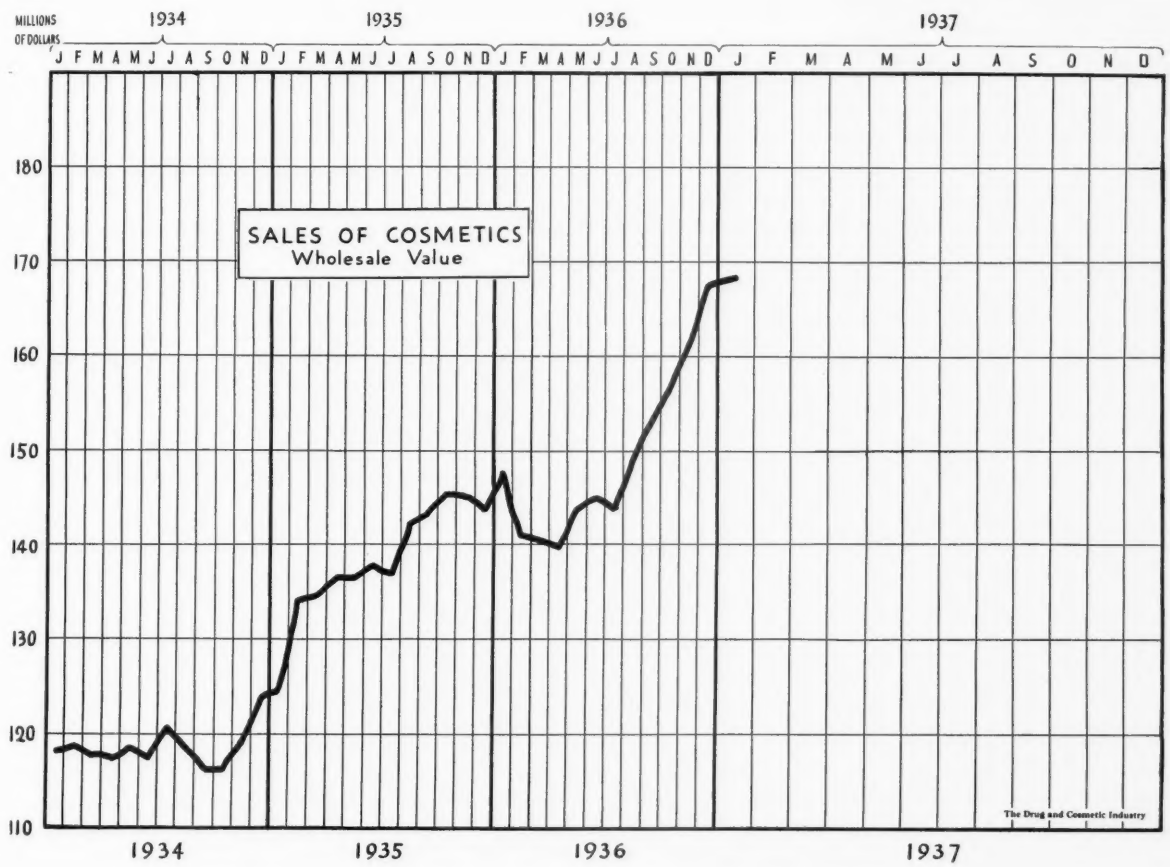
Many measures have been advocated for the treatment of agranulocytosis. None are specific. Inasmuch as the treatment of any disease of an uncertain nature is at best unsatisfactory. The therapy depends largely upon the judgment of the physician. It is generally agreed however, that the major problem is the restoring of the bone marrow to its normal activity as a blood cell creating center and thus raising the peripheral white count, for the loss of white cells removes one of the body's great defenses against infection. Without bone marrow recovery, there can be no cure. Blood transfusions, X-rays, liver extract injections have been tried with varied success. Jackson and Parker highly recommend Pentonucleotide (N.N.R.) given intramuscularly. Sixty-seven per cent of patients treated by this method had recovered and are alive today. This is by far the most successful procedure.[10]

During 1934 and 1935, many medical and scientific publications devoted much space to discussions of aminopyrine and its relationship to agranulocytosis. In November 1934, W. G. Campbell of the Federal Food and Drug Administration issued a warning on the use of aminopyrine. This was avidly followed up by the lay press. In response to these reports, based upon incomplete and uncertain data, many laws were passed controlling the sale of aminopyrine. Some of these re-

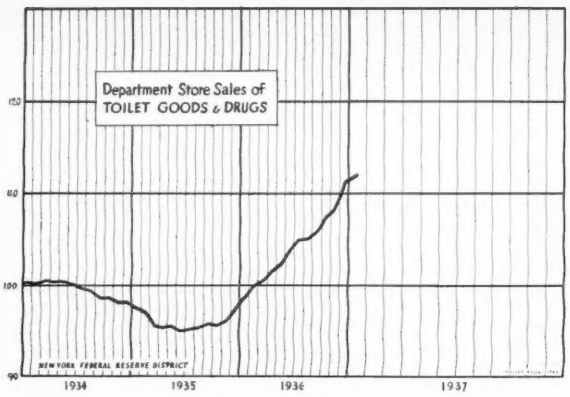
(*Continued on page 371*)

MERCHANDISING NEWS

THE TREND IN COSMETICS: Sets of cosmetics for home, travel and office use are expected to come into the foreground of consumer interest during the coming summer. They will sell at anything from ten cents upwards and will cover practically the whole range of cosmetic merchandise. The treatment set is becoming more and more in vogue with the better type of cosmetic customer and is gaining a firm foothold also in the lower priced stores. Another important article this summer will be cosmetic ensembles in



Wholesale sales of cosmetics and toilet preparations continue to exceed previous highs, for the twelve month period ended January 1937 reaching $168,343,000, compared with $167,704,000 in the twelve months ended December 1936 and $147,573,000 for the year ended January 1936. These dollar values correspond to increases in trend of 0.4 per cent for January over December and 14.1 per cent for January 1937 over January 1936.



Department store sales of toilet articles and drug sundries in the New York Federal Reserve District in January 1937 were 8.9 per cent. ahead of sales in the same month of the preceding year. This corresponds to adjusted index numbers of 111.9 for January 1937, 111.1 for December 1936 and 98.6 for January 1936.

ornamental packages for hostess gifts. The gift line, in fact, is steadily expanding and even such articles of everyday use as bath salts, soaps and powder puffs make welcome hostess gifts today. Several stores plan to make special promotions of packages of guest soaps, individual powder puffs etc., with an appeal to the purchaser who wants to take her hostess something useful, instead of the habitual package of candy.

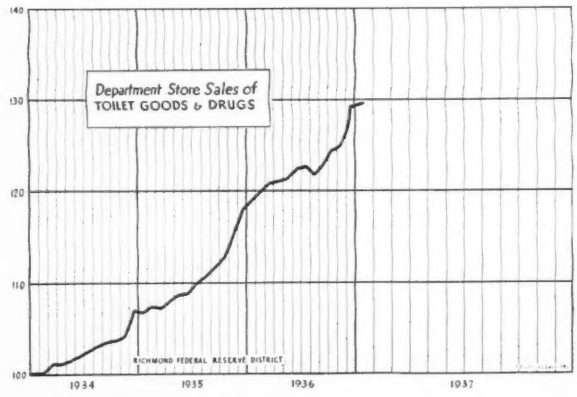
Buyers expect that summer promotions will have to be started earlier this year than usual. The flow of visitors leaving these shores late in April for the British coronation will set the business going. Summer merchandise will be pushed in most stores from that date. Indications are that the business will continue very active right into late July.

The brown and henna shades have definitely taken the lead in color preferences. They will supply the dominant note for make-up preparations this summer. For the coming winter the pastel shades, relegated to the background for the present, may find their long expected try-out.

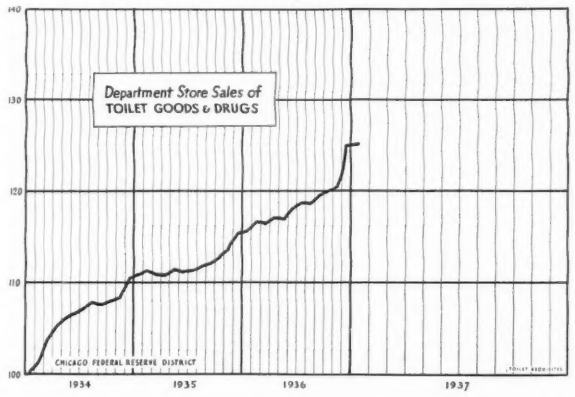
In perfumes the bouquets are not only holding their own but are gaining ground, with the Eastern scents and combinations getting support from the more cautious buyers.

Buyers believe that a market can be created for extravagant cosmetic specialties, such as gold and silver powders to be sprinkled over the hair. Novelties of this type are asked for and will find ready support by the stores with a more fashionable clientele. Customers are turning to quality although there is a decline in the demand for large sized packages of high priced items, such as the more costly perfumes. Buyers believe that the medium sized packages are a better investment at this time.

Department stores have had a demand for quality articles in jewelry containers—perfumes in cut glass bottles, small pocket vials of perfume, lipsticks and compacts. Bath room necessities in ornamental containers continue in the lead in the better grades. Drug stores have started to push over-size shaving sticks, selling at approximately 50 cents. Some druggists believe that this will enable them to fight the competition of the 10 cent stores and that the 364 day shaving stick can be made a more profitable seller. This is in line with a general trend for larger packages in utility cosmetics, selling in the medium price ranges, such as talcum powders, bath crystals and other products whose sale in smaller packages has been made increasingly unprofitable for the better type specialty store by the low price chain store competition.



Sales toilet articles and preparations by Baltimore department stores were 7.5 per cent. greater in January 1937 than in January 1936. For the city of Washington the increase for the same periods was only nine-tenths per cent. In the Richmond Federal Reserve District as a whole, sales increased by 3.8 per cent. over the same month of the preceding year. Adjusted index numbers for the whole district were 129.5 for January 1937, 129.2 for December 1936 and 118.9 for January 1936.



Sales of toilet goods and drugs by department stores in the Chicago Federal Reserve District were 4.0 per cent greater in January 1937 than in January 1936. This corresponds to an adjusted index number of 125.3 for January 1937, comparing with 124.9 for December 1936 and 115.6 for January 1936.

COOPERATIVE ADVERTISING: Cooperative newspaper advertising came under the retailers' eagle eye in a search for greater benefits from manufacturers at a recent meeting of the Cosmetic Group of the Merchandising Division of the National Retail Dry Goods Association. Manufacturers were urged to give retailers the full national rate rather than the rate of approximately half this amount which the retailer now pays. Several speakers urged that the manufacturer also pay production costs which they estimated at 20 to 50 per cent.

Retailers do not fully understand the value of cooperative advertising from the manufacturer's viewpoint. In buying cooperative advertising the manufacturer operates under a heavy burden as compared with buying the same space, in the same newspaper, direct. It is seldom that the manufacturer can control the time of insertion of cooperative advertising. Examples are plentiful of the manufacturer who has seen his advertising appear on the same day in the same paper under the name of two or three stores. He has seen it run consecutively, as fill-ins, during a two or three day period. He has seen it left out entirely during a period when the store had other plans and other ideas. He has not been able to exercise control over the placing on favorable days at proper intervals.

Another factor often limiting the value of the advertisement is the manufacturer's lack of control of position. Department store advertisements are designed to produce immediate sales. They consist of bargains, special offers, seasonal goods. Institutional advertising in this atmosphere falls flat. And some manufacturers have found that, for this reason, cooperative advertising placed with department store advertising is no bargain even at the local rate.

Advertising tied up with one store does not get the full value of the circulation—it gets that part which comprises the normal trade of the one store. As for production cost, the manufacturer cannot only produce mats at a much lower cost than the 20 to 50 per cent asked, but he would be wiser to do so because a tested appeal and set-up, developed by him, has proved more effective than the diversified efforts of the overworked advertising department of the store.

Cooperative advertising in which the manufacturer features the store's name and pays the store's full local rate is an advantage retailers would do well not to press. They should take it and like it for it may not always be with them.

CONTAINER CORPORATION OF AMERICA has opened a permanent International Package Exhibition at the new offices of the company, 420 Lexington Ave., New York.

The exhibit is a representative collection of containers gathered from many parts of the world and includes both retail packages and shipping cases.

A feature of the reception room, which was especially designed to house this exhibit, is a series of murals executed by Wayne Colvin, showing in diagramatic technique the sources of raw material, the processes of manufacture, and the eventual destination of the company's paperboard.

Special display cabinets in blonde woods, walls of glass brick, indirect lighting, and built-in lounges give a fresh, modern setting for the exhibition. The room was designed by the art department of Container Corporation of America.

It is expected that package designs and color treatments by foreign artists will be of interest to American designers, and the work of foreign paperboard mills and converters may be compared with that of similar American trade factors.

E. R. SQUIBB & SONS have pulled an entirely new merchandising stunt in introducing their new Squibb Brushless Shave. With this item they do not give a small and large size as they did with their Tooth Powder, offering to refund the purchase price if the user tried the small size and did not like the powder. Neither do they offer a shaving brush combination as they once did with their regular Shaving Cream.

Instead they have packaged the product with two full-sized tubes in a carton offering the two tubes for the

quoted price. And it is not a one-cent combination. The man who buys the Squibb Brushless Shave, gets two tubes for forty-nine cents. Because this size in other brushless shaves generally sells for a list price of thirty-five cents, the carton shows seventy cents crossed out, and forty-nine cents showing below it.

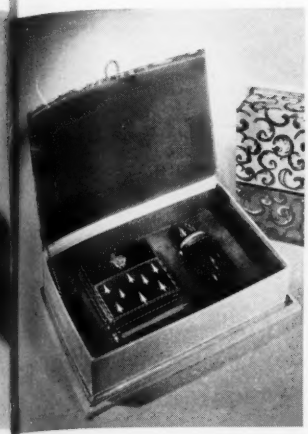
Perhaps this is just a novel way of introducing a new product at a price below the market, but it has distinct advantages over combination offers. In the first place, the combination of two tubes does not displace a sale of a companion item in the retail store such as was the case when tooth brushes and shaving brushes were offered. Furthermore, the man who goes in for a brushless shave would be more apt to take a combination which gives him two packages of what he really wants, then he would be to take a combination of a tube of shaving cream and a face lotion or powder which he may never use.

The Owl
CITRATE
MAGNESIA
The Owl
CITRATE
MAGNESIA

White's
COD LIVER OIL
CONCENTRATE
LIQUID
White's
COD LIVER OIL
CONCENTRATE
LIQUID
White's
COD LIVER OIL
CONCENTRATE
CAPSULES
White's
COD LIVER OIL
CONCENTRATE
CAPSULES

BRIT·TEX
BRITTLE
BRIT·TEX
FOR BRITTLE NAILS

PURSANG
LAXATIVE PILLS
An effective Laxative
PURELY VEGETABLE



ST. DENIS

St. Denis has created a facial treatment of all liquid emulsions, including facial bath, toning lotion, Re-Texture Balm, and foundation lotion.

OWL DRUG

The Owl Drug Co. saw possibilities in the Citrate of Magnesia and decided to place it into the smartly packaged field. With the cooperation of the Owens-Illinois Pacific Coast Co. the attractive package shown was designed.

D'ORSAY

D'Orsay has re-styled its line in a smart new white "quilting" design of unusual beauty. This is carried out in the face, bath and talcum powder, lipstick and rouge. The face powder in this new package design is available in the fragrances of Le Dandy, Comtesse and Toujours Fidele.

YARDLEY

Yardley of London presents Bond Street perfume and a triple compact, together in a velvet lined jewel box, especially for the coming Coronation. The triple compact has been restyled, with a white ermine motif on the gold base and black enamel bands on the top and back of the compact.

HEALTH PRODUCTS

Dillard's Aspergum may now be obtained in a new family-size package containing 36 tablets packed in a moisture-proof bottle which permits keeping it in a bathroom cabinet without fear of spoiling.

WHITE LABS.

Two new sizes have been added to the White's cod liver oil concentrate line. One is the 25c bottle of liquid concentrate, and the other is a bottle of 100 concentrate capsules.

TUSSY

Tussy sponsors four lovely shades of nail polish, especially blended for Spring and Summer wear—Camellia Pink, Coral, Dusty Pink and Wood Rose.

GASTON DE PARIS

Gaston de Paris has just announced the addition of a special nourishing lotion for dry skin to the line. It is packaged in an attractive white square jar with blue lettering and blue cap, and is available in three sizes, 4, 8 and 16 ounces.

LENTHERIC

Lentheric announces a complete "Bal Masque" ensemble, which includes a vanity and lipstick, face powder and bath powder, in addition to the original Bal Masque presentation of the "Three Silent Messengers" and the floral soaps which were introduced recently. The face powder and bath powder harmonize in color scheme of French blue and fuchsia with the soap and trio of Bouquets. Also, the decorative design of madcap merrymakers at a masquerade ball is repeated.

THOMAS PRODUCTS

Brit-Tex, a product of Thomas Products, Inc., makes its bow in a new dress. The container is a black and white jar, the top of which is white, blending into the neck of the jar, and the base black with white lettering.

McKESSON

A container that holds one dozen packages of Pursang Laxative pills and which can be adjusted to form a compact and striking counter display, has been created by McKesson & Robbins, Inc.

SEVENTEEN

Cream Lotion is Seventeen's contribution to refined skin. This new presentation, of creamy consistency and easy to apply, is especially good for chapped and roughened skin. Besides acting as an antiseptic and giving relief, it smooths the skin. It is excellent for the body as well as for the hands and face.

HOUBIGANT

Houbigant now completes the line of Gardenia Concentre items of perfume, toilet water, face powder and dusting powder, with additions of a middle-size perfume, talcum powder and sachet powder. All are packaged in the same handsome black and white pattern.

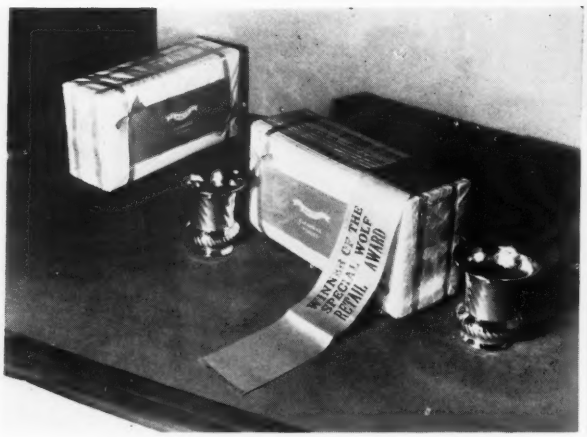
PURE
Olive Oil
CASTILE SOAP
Castile
SHAMPOO

FOR RELIEF OF PAIN
AFTER TOOTH EXTRACTION
SIMPLE HEADACHE
SIMPLE NEURALGIA
Try
R99
25
R99 R99

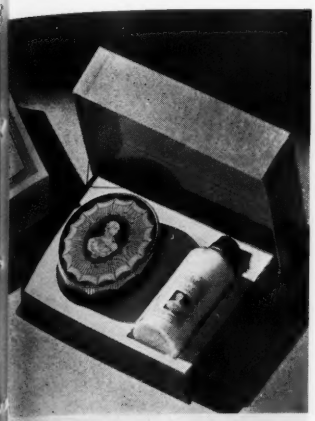
CAMELIA
CAMELIA

Woodbury's

BISLEY'S BATH


WINNER OF THE
SPECIAL WOLF
RETAIL AWARD

Spring Treatment



CONTI

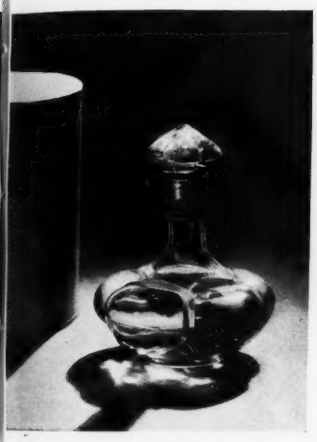
Conti's castile shampoo has been repackaged and now makes its appearance in a bottle which is graceful and conveniently fits the hand. It comes in a smart carton of green, white, and gold to match the soap carton.

McKESSON

A new product for the relief of pain following tooth extraction and simple neuralgia, etc., known as McKesson's Rx99, has been released for distribution by McKesson & Robbins, Inc.

SPOONER

Spooner presents an unusually attractive package of bath oil, in three odors, pine, lavender and gardenia. Tiny artificial flowers attached to the carton in which the bottle rests, are used to designate the odors.



RICHARD HUDNUT

A special DuBarry combination of face powder and a bottle of Milk of Cucumber, (a powder foundation), is offered by Richard Hudnut.

MARY DUNHILL

Mary Dunhill has introduced a dram size bottle of Flowers of Devonshire perfume, packaged in a miniature hat box with a bow of ribbon in orchid and silver.

PARFUMERIE DE RAYMOND

Parfumerie de Raymond is adding six floral odors to the line, which include Lilas et Lys, Rose, Sweet Pea, Violet, Lilas Blanc, and Camelia. The new florals are packaged in ¼ ounce sizes.

WOODBURY

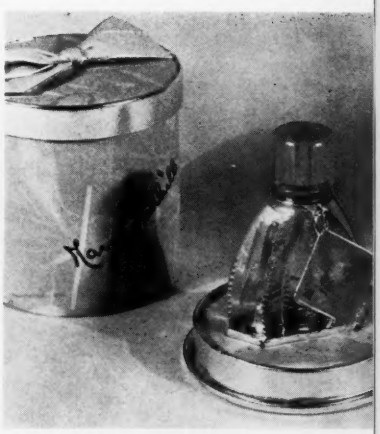
A new shade of Woodbury's Facial Powder, named Windsor Rose, has been created by Maggy Rouff. The attractive blue box won first prize in the recent Syndicate Store Merchandiser packaging contest.

ALLEN B. WRISLEY

Wrisley's beautiful new Spring line of bath accessories includes a handsome large drum of fragrant bath crystals. The drum is covered in satin and is available in three colors: green contains pine crystals; orchid, lavender crystals, and peach, gardenia crystals.

PARFUMS CORDAY

Corday has ensembled face powder, dusting powder, lipstick, rouge and Eau de Cologne in the Orchidee Bleue odor. The cologne is the most recent addition to the ensembling idea—packaged in the same style bottle as the Orchidee Bleue perfume.



GUERLAIN

Guerlain, for the first time, offers a perfumed Eau de Cologne. This new product is perfumed with Shalimar, Mitsouko, and a brand new odor called "Cachet Jaune," (Yellow Seal), created purposely. This Eau de Cologne is available in four different sizes.

NATIONAL CELLULOSE

The National Cellulose Co., was awarded the special Wolf retail award on its package of facial tissues.

DOROTHY GRAY

Dorothy Gray is offering a Spring Treatment Package containing special sizes of Dorothy Gray preparations for corrective cleansing, stimulating, softening, etc.

ZELL PRODUCTS

The Zell Products Corp. has introduced the "Zelpak Make-up Vanity." It is a complete make-up kit with rouge, cake powder, lip paste, eye shadow, mascara, two puffs and a mirror. The case is finished in enamel in black, white, blue, green, plum and red, with matching rhinestone decoration and white metal trim.

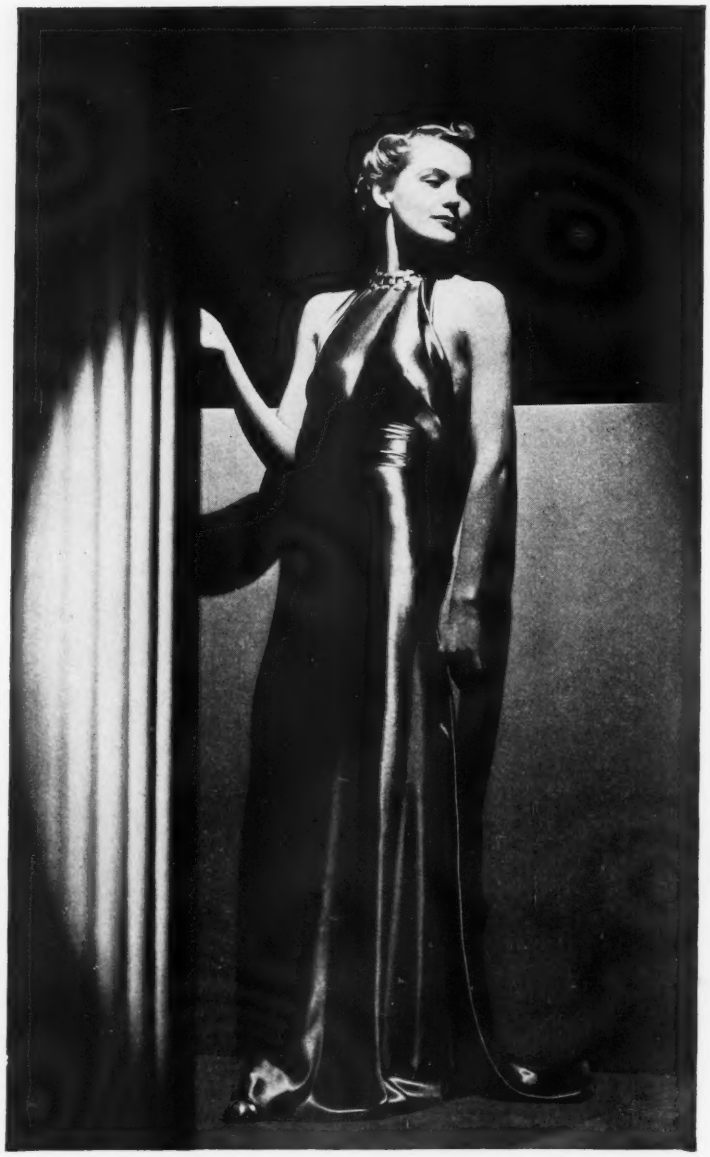
BARBARA BATES

Barbara Bates offers five nail polish shades for Spring and Summer, and also a clear, colorless polish for those who want no color. The shades are Rose Mist, Crushed Rose, Rose Tan, Rose Geranium, American Beauty Rose.

Barbara Bates Ball Buffer is a thing of beauty in line, shape and colors. The ball handle, like an overgrown pearl, comes in rose, white, pink, red and blue.

"CLOTHES" Make The Woman

....and sell the product!



Smart, attractive "clothes" make your product stand out above competition • give it shelf-expression. NATIONAL CAN'S design department works on the same theory as the smartest women shoppers themselves. Women realize that good appearance is a big asset, and respond to good styling in products at the grocer's or the druggist's just as much as in the dress shop.

● Put your product in a "NATIONAL" metal package, and you give it an attractiveness that works on a woman's style sense. She parts with her money more quickly. She will prefer your well dressed product to its more commonplace competitor.

● Call in "NATIONAL". We'll help you present your product at its *fashion* best. You will be pleased with the ideas, the ingenuity, and quality of "product dress" we can put at your disposal. Inquiries cost nothing • may yield much!

NATIONAL

NATIONAL CAN COMPANY • EXECUTIVE OFFICES • 110 EAST 42nd STREET • NEW YORK CITY
Sales Offices and Plants • NEW YORK CITY • BALTIMORE • BROOKLYN • CHICAGO • BOSTON • DETROIT • HAMILTON, OHIO

WOLF AWARD

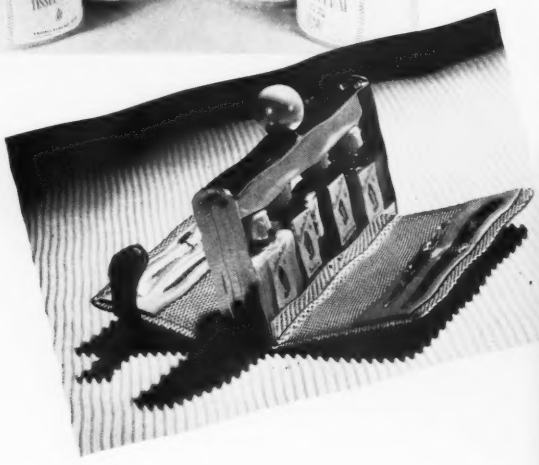
THE 1936-37 Irwin D. Wolf Awards Competition for distinctive merit in packaging was held in February, and all entries in the competition will be on display as a featured exhibit at the Seventh Packaging Exposition to be held at the Pennsylvania Hotel, New York, March 23 to 26.

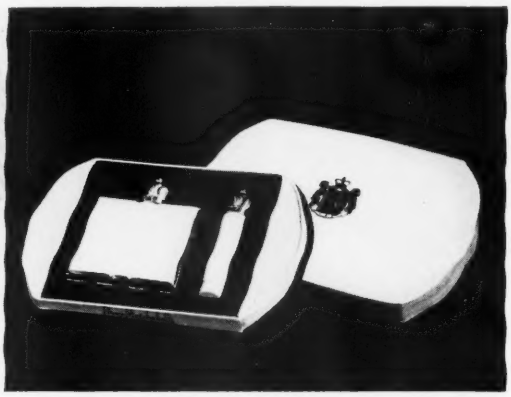
As usual, among the various packages entered, were a great many from this industry, and the satisfying part of it is that the Irwin D. Wolf Trophy was awarded to a group of cosmetic packages. The Adrienne Cosmetic packages used by the United Drug Company, (pictured at lower left corner of the page) were awarded the Trophy. Honors were also awarded in twenty merchandising classifications, in which group are a number of entries by this industry.

While it is not possible to show all the packages entered, we are showing a few which are deserving of comment, together with those which received honors or honorable mention from the judges.

The Vorol carton entered by the American Coating Mills, seems to be a noteworthy example of a display carton.

The Abbott Alcolo bottle entered by the Abbott Laboratories, is shown "before and after." The bottle at the left of the photograph has been used for years and is a strange contrast to the new bottle,





which is not only handsome, but so much easier to handle.

The third photo shows a group of three somewhat unusual departures from the usual packaging. The Little Brown Jug used by Mecca Sales Co., makes an interesting container for bath oil. The Maison Jeurelle canteen was designed especially for the limited edition of Jeurelle perfumes. The miniature seltzer bottle used by Parfums Weil, makes a delightful eau de cologne dispenser.

At the extreme lower right is shown an interesting group of moulded packages. The Coty manicure ensemble, entered by the Beetle Products Division of American Cyanamid Co., was given honorable mention by the judges. The Minimax container has a re-use value, and the Colgate shave stick shows a definite advance in this type of packaging. The three-in-one hostess package used by Dedon Labs., and entered by the Plaskon Co., is a neat and convenient way of ensembling containers.

The photo at the upper left shows a group of cans, among them the Matchabelli dusting powder box, entered by Owens-Illinois Can Co., received honorable mention. The Avon talcum cans used by Allied Products, the Bourjois Mansfield men's talc, and Mallinckrodt's baby powder containers, are all outstanding examples of modern metal packages.

The Valevia set, Denti-set and the Ryko Dandruff remover and shampoo set, prove how neatly and attractively products can be grouped.

Harriet Hubbard Ayer's group of packages are a good example of plain, simple but effective packages using one color.

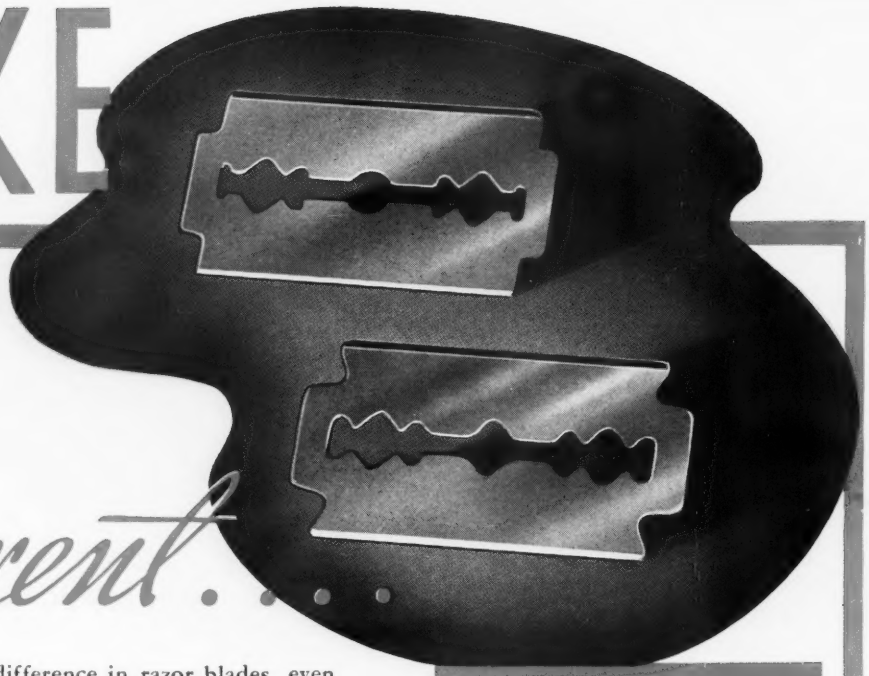
The Barbara Bates "Coronation" manicure set shown at the lower left, was given honors for the most effective use of inventive genius in package construction, and the Prince Matchabelli sceptre compact and lipstick set was given honors as the most effective packaging of a combination sales unit.

TASTE . . . Women of America, perhaps with the simplest tastes, perhaps with the most luxurious, prefer their cosmetics in modern snow-white Hazel-Atlas Opal Jars.

HAZEL-ATLAS GLASS COMPANY WHEELING, WEST VIRGINIA

This illustration shows a Hazel-Atlas "Standard Line" Opal Jar, complete with orchid double shell cap. Double Shell caps are stocked in black only, but any color can be produced on special order provided quantities are sufficient.

ALIKE



YET *Different . . .*

Everyone knows there is a difference in razor blades, even though they look alike. The same is true of screw caps. In appearance they are all pretty much the same. But CCS Screw Caps seal more effectively because they have a special thread.

The Deep Hook Thread is patented. It is available only in CCS Screw Caps. And it gives you these definite advantages in the sealing of your product:

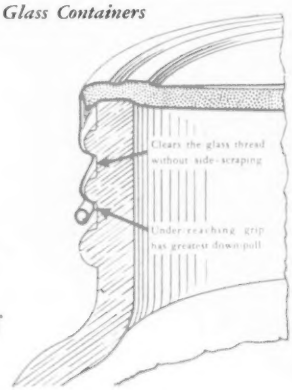
1. Spins on the glass thread	PRODUCTION SPEED
2. Seals tighter with less application force	SECURITY FOR YOUR PRODUCT
3. Far easier to remove from the container	CONVENIENCE FOR YOUR CUSTOMERS

The best way to see the difference in CCS Screw Caps is to give them a trial. An adequate supply for testing will be sent gladly on request.

CROWN CORK AND SEAL CO., BALTIMORE, MD.
World's Largest Makers of Closures for Glass Containers

CCS *Closures*

BETTER SEALING FOR YOUR PRODUCT



CCS PARTIAL DOME CAP

Here's beauty without the sacrifice of sealing efficiency. CCS Partial Dome Caps are made with the same patented Deep Hook Thread and correctly placed sealing bead which have made CCS Screw Caps the standard of the industry.

You are assured of real protection for your product as well as pleasing good looks for your package when you use CCS Partial Dome Caps.

Lily of the Valley

This pleasant fragrance is effective in perfumes, powders, creams, or lotions. Recent research has determined hitherto unknown constituents of Lily of the Valley, all of which must be included to create a really good, well rounded perfume.

The Schimmel Lily of the Valley fragrances are based on these discoveries. For example, Lily of the Valley, extra, "Sch & Co." is as forceful and tenacious as the fresh flowers, yet the finished base is so subtly blended that it is a unified whole.

When writing for samples mention the product to be perfumed.

Schimmel
& Co., Inc.

601 West 26th St., New York, N.Y.

Boston **Chicago**
Los Angeles **Toronto**

New Perfection
DROPPING PARTS

. . . . are drawn to the most exacting accuracy—thus the opening is just right and as you want it for the particular medicine with which they are to be used. New Perfection workmanship is the result of scientific and painstaking attention to every detail—that's why New Perfection Dropping Parts are the standard in the field, acting as an integral part of the packages and helping to build good will for the manufacturer, physician and user!

Patented in United States, Canada, Great Britain and other Countries

No. 5
Fancy Durez cap; midget rubber part; regular straight glass.

No. 4
Single shell metal cap; clutch rubber part; tooled blunt glass.

No. 3
Regular depth bakelite cap; synthetic rubber part; semi-blunt glass.

No. 1
Non-rolling, extra depth, bakelite cap; oil-resistant rubber parts; Saftee ball glass.

PENNSYLVANIA GLASS PRODUCTS COMPANY
"GLASS GOODS OF THE BETTER KIND"
410-412 North Craig Street, Pittsburgh, Pa.

Rachel

(*Continued from page 341*)

to have you get mild Tincture of Iodine. This is official in the Pharmacopoeia, as well as the strong Iodine which I sold you. It is required to be manufactured from Iodine, Sodium Iodide, and diluted alcohol—and by diluted alcohol I mean grain alcohol and water, and not rubbing alcohol.

"It is not only adulterated when an equal volume of rubbing alcohol is added to the Tincture, but results in a product that is over strength in comparison with the U.S.P. mild Tincture of Iodine. I, therefore, consider it too strong to use as an antiseptic treatment. I don't see why 'Rachel, Under The Supervision of The Department of Labor' didn't take the trouble to look up in the U. S. Pharmacopoeia and find out that mild Tincture of Iodine is official, and if that is what she wanted you to have say so and any good drug store would have sold it to you."

"It's bad enough to have the Department of Labor sponsoring Rachel to write instructions to have the public make its own National Formulary dental powder and not pay me a just charge for making the product correctly, but they are going a step too far when it comes to telling you to make a mild Tincture of Iodine out of rubbing alcohol and strong Tincture of Iodine."

It certainly is a pretty kettle of fish for a Department of the U. S. Government to be telling the public to make official products out of ingredients which, if any pharmacist or manufacturer did the same thing they would be prosecuted under the law for selling an adulterated product. I am certainly going to write my Congressman to see what can be done to break up such nonsense. Come around tomorrow and I will be glad to see that you get some mild Tincture of Iodine of guaranteed U.S.P. quality."

"Oh, thank you so much, Mr. Wise, for telling me all this. It is really too bad that more people in town don't know that you pharmacists are something more than just merchants; that you have studied and know medicine and can tell us all about them. Really, Mr. Wise, I have had a terribly hectic day—with Johnny's skinned knee and scratched eye and Susie's burned hand, and no antiseptic in the house that was safe to use, I don't know what to do. Perhaps you can tell me of some soothing, non-irritating antiseptic that actually promotes healing; that I dare use on ordinary cuts, scratches and burns, one that I can keep in the Medicine Cabinet and that will not deteriorate."

"Surely, Mrs. Average Citizen. The Research Departments of the large pharmaceutical houses are continually working on just such products. They have brought out many such preparations. I have several in mind that are meritorious which will answer your requirements and I will be glad to tell you about them tomorrow."

"Thanks again, Mr. Wise, and perhaps if 'Rachel, Under the Supervision of The Department of Labor,' doesn't know any more about laxatives, emetics, mouth washes and tooth brushes, than she does about antiseptics I will also let you help me select these for our Medicine Cabinet. Good-bye, Mr. Wise."

That night, after Dr. Smith had dressed Johnny's scratches and scrapes, as well as Susie's burn, Mrs. Average Citizen turned to George.

"George darling, I wouldn't want Rachel to catch a cold, because I will never wish anyone bad luck, but you know Rachel says—

"*The one remedy that is most effective for treating Colds—Rest in Bed.*"

"But really, George, wouldn't it be a wonderful thing for the public if Rachel had to go to bed or some other place and stop writing articles about medicine? Why, if I had Rachel here now, I would wash out her mouth—you know that's what the teacher did to bad little girls who told stories. I think I would use that wonderful mouth wash which she recommends—

"*Two teaspoonfuls of Salt in a quart of water.*"

Glycerine

(*Continued from page 336*)

Following is an abbreviated list of the products in the making or preserving of which glycerine has found a place:

Varnishes; cigarettes; explosives; creams, cosmetics, perfumes and liquid soap; anti-freeze solutions; drug solvent; emollient solutions; ointments and plasters; vaccine lymph; snuff and spirits; surgical tapes; laxatives and antiseptics; insecticides; toothpaste; chewing gum; printing inks, rubber stamp pads and typewriter ribbons; paper and parchments; textiles and felts; dyeing; thread; golf balls; cement and plastic clay; glue; artists' colors; corks; confectionery and candy; soft drinks; shoe blacking; leather; gas meters; machinery oil; preserving meat and fish products; photographic emulsions.

Many industries, related to the above, would find it hard to do without glycerine and the present shortage, if continued too long, may well lead to speculation as to whether omnipotent Japan will step into the breach.

Japan's twelve largest glycerine producers have a capacity at the present time of 665 metric tons a month. Her domestic consumption requires 8000 metric tons annually, used in the following proportions: cosmetics 13%; tobacco 22%; medicine 22%; explosives 43%. The remainder is now exported.

It should not be difficult for her to step up production to such an extent as to capture an extremely profitable export trade in this commodity.

Eye Preparations

(*Continued from page 344*)

Color the foregoing base with any of the combinations which follow: *Violet*—violet lake, 1 part; zinc oxide, 3 parts. *Blue*—equal parts of ultramarine blue and zinc oxide. *Dark Green*—green lake, 3 parts; zinc oxide, 1 part; *Light Green*—green lake, 1 part; zinc oxide,

CATCH *the eye...* CLINCH *the sale with Colorful Artmold Caps*

ARMSTRONG'S Artmold Caps say "class" in a striking way. Their bright colors, smart designs, and soft rich texture catch the eye and make women want to buy. In the Jean Nolan group of beauty lotions illustrated at the right, Armstrong's Artmold Caps are molded in a value of orange that harmonizes perfectly with the label colors. The result is a good example of the pleasing packaging effects that can be obtained through the use of Artmold Caps.

With these attractive caps, it is easy to create packages that do a real selling job for your product. They are available in a wide range of standard designs, colors, and sizes, or may be specially molded to order with your name or private design. In addition to their attractive appearance, Armstrong's Artmold Caps provide a secure seal that gives dependable protection to your product. And they are so easy to use that delicate feminine fingers can remove or replace them with a simple twist. Send today for your free copy of the new color-illustrated booklet, "Better Seals for Better Sales," containing complete details of Artmold Caps and other Armstrong Closures. Write Armstrong Cork Products Company, Closure Division, 913 Arch Street, Lancaster, Pennsylvania.

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

Armstrong's ARTMOLD CAPS

3 parts. *Gray*—ultramarine blue, 1 part; carbon black, 1 part; zinc oxide, 2 parts. *Brown*—burnt umber, 3 parts; zinc oxide, 1 part. Usually, 4 parts of the color will suffice for the proportions called for in the above base.

Eye washes for *horses* have been recommended as follows:

I

Arnica Flowers	5 parts
Chamomile Flowers	5 parts
Distilled Water, enough to make	100 parts

Infuse the flowers in hot water; cool; filter; and make up to volume with water.

II

Zinc Sulfate	1.6 parts
Boric Acid	4.0 parts
Camphor Water	72.0 parts
Distilled Water, enough to make	100.0 parts

III

Sodium Bicarbonate	1.5 parts
Sodium Borate	1.5 parts
Sodium Chloride	1.5 parts
Glycerin	6.0 parts
Distilled Water, enough to make	400.0 parts

Aminopyrine

(*Continued from page 358*)

flect the uncertainty of the promulgators of the rulings. The New York amendment to the Sanitary Code, issued July 31, 1935 is illustrative. Section 126a of the Code, regulating the sale of harmful drugs says in part, "For the purpose of this section the term 'harmful drug' shall mean and include the following drugs, compounds, preparations or mixtures thereof:—and amidopyrine in excess of two (2) grains." Amidopyrine is now sold in tubes of two grain tablets instead of five grains.

In London, after the death of a man who had taken eight tablets of aminopyrine, an obvious overdose, it was stated that the drug would be placed on the dangerous list, rendering its promiscuous sale more or less impossible. Sir Bernard Spilsbury, the government pathologist, pointed out that there was nothing on the bottle warning against taking too many.[13]

There can be no question that more intense research regarding the action of aminopyrine and related drugs is necessary—even essential. Only in this way can laws, if found to be needed, be enforced in the light of exact knowledge. In the meantime, as has been advocated by the Federal Food and Drug Administration, manufacturers should mention the presence of aminopyrine in their preparations. This will aid those who are sensitive to the drug in the avoidance of it. A mention of the dosage on the label, and perhaps a warning against taking too much, might prevent many more cases of agranulocytosis. Certainly such a voluntary action on the part of manufacturers is better than absolute legal restriction, which would entirely cut off the non-prescription market.

Meanwhile let it not be forgotten that aminopyrine is a most useful and valued drug. That as yet no absolute case has been made against it. Perhaps Waggoner's summary[4] makes the best conclusion, "Much has been written during the past few years about the harmful effects of certain drugs. Perhaps aminopyrine has been most severy indicted for its supposed cause of agranulocytosis. There are still many who are afraid to prescribe this splendid analgesic because of the possibility of harm resulting from its use. The property of producing agranulocytosis may be due to the benzene ring, but many cases of industrial benzene poisoning have been noted without agranulocytosis. It is logical to believe that there may be an idiosyncracy to the drug, just as there is to many other valuable drugs. It should not be discarded because of the unfortunate reaction in a few cases."

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Tested Formulas

(*Continued from page 353*)

enter at all. Pastes are better looking when they are opaque and the choice is generally limited to white powders. Zinc oxide may be added (when there is no chemical incompatibility)to impart whiteness. Vanishing creams must be handled with extreme care, since the addition of many electrolytes will destroy the cream; methenamine used here is not destructive to the emulsion. Many other compounds, not mentioned here, are useful in deodorizing preparations and may be used instead of or in addition to those specifically described.

Watching and Working

(*Continued from page 333*)

metic regulatory legislation, including, of course, FDA control over advertising of those classes of products. The work of Dr. Durrett, Chief of the Drug Division, has been referred to. Dr. A. E. Taylor is in charge of the Import Division which inspects importations of crude drugs and drug products.

Some time ago Dr. E. E. Nelson was succeeded by Dr. Herbert C. Calvery as head of the Division of Pharmacology. Dr. Calvery outlines the work of his division to the writer as principally along the following lines: assay and control of biologicals, which have to be analyzed only on animals; biological assays of crude drugs and important drug preparations such as digitalis, strophanthus, squill, ergot, pituitary, insulin and epinephrine or adrenalin. These products are standardized and samplings of the manufactured products throughout the United States are taken and assayed annually. Also the Pharmacology Division is making a special study of estrogenic hormones which started about two years ago, and is carrying on detailed study of the toxicity of lead and arsenic, particularly in spray

VICTOR ALUMINUM TUBES

Mr. Temple Speaking

(The first of a series of talks on Aluminum tubes)

Mr. George Temple, Superintendent of Victor Metal Products Corp'n. He knows tubes "from cap to clip"

THEY GET IT IN THE NECK

WHY do you suppose so many caps will not fit on to the tube before the consumer has used up the contents? I'll tell you.

Where the neck of the tube is unable to withstand the many pressures resulting from squeezing out the material, it soon becomes forced out of round. These pressures which so affect many other tubes, have little or no effect on the neck of a Victor Aluminum tube.

By our own process of manufacturing, we are able to keep the necks of our aluminum tubes rigid so that they hold their original shape regardless of the distortion of the tube through continued squeezing. Because of this feature, the cap will always fit easily to the thread.

▲

There are other advantages to Victor Aluminum tubes. They are lighter in weight. The tube walls are soft and easily rollable. They can stand rough handling. I shall tell you more in my next talk. Meanwhile, let me suggest that before you place another order for tubes, ask us to quote on our Victor Aluminum tubes and to send you samples along with the quotation.

Mr. Temple's next subject will be "Merrily We Roll Along." Watch for it.

Where your product is such that you must use a tin tube, or where a tin coated lead tube will serve your purpose, let us quote you on these grades.

VICTOR METAL PRODUCTS
CORPORATION
200 Diamond St. Brooklyn, N. Y.

residue on fresh fruits and vegetables. A special committee of the National Academy of Sciences is reviewing the research program on this last subject under Dr. Calvery's jurisdiction.

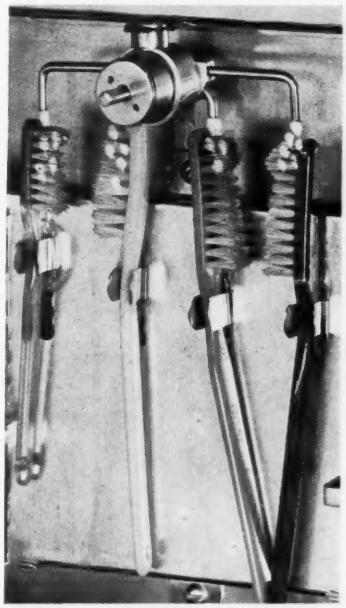
The newest division of FDA is the Vitamin Division, in charge of Dr. E. M. Nelson. This division is carrying on extensive examinations and tests of cod liver oil, vitamin milk, and many other vitamin products and preparations both in the food and drug line.

In handling the work of drug control, Dr. Durrett has the cooperation of Dr. T. G. Clump as chief medical advisor. Dr. Clump is a comparative newcomer to FDA, but his advice appears to be relied upon extensively by his chief. Dr. W. S. Frisbie is in charge of the Division of State Cooperation, which endeavors so to coordinate regulations and activities of state and local food and drug authorities as to harmonize with those of FDA. A Color Certification Section, headed by H. T. Herrick, passes on artificial colorings for drugs and foods. In carrying on the drug and related work of FDA, Mr. Campbell and Dr. Dunbar also receive the active assistance and cooperation of F. B. Linton, Assistant to the Chief; G. C. McDonnell, Chief of the Insecticide Division which also controls fungicides; Dr. W. B. White, Chief of the Food Division; B. J. Howard, of the Micro-analytical Division; and F. P. Veitch, of the Naval Stores Division.

While undoubtedly doing valuable work along many lines, FDA is freely criticised by drug and toilet preparation people, who assert that certain FDA officials are much too technical for practical purposes. In some instances they are said to carry the virtue of consistency to a point where illogical and even apparently inconsistent results follow. While proprietary interests object to FDA radical rulings concerning their products, pharmaceutical interests complain equally as loudly on the ground that most pharmaceuticals go directly to physicians for use in their practice. Such professional men know what the products are and what is in them and what they should be administered for. Under the circumstances, conservative critics declare that certain FDA requirements concerning labeling of pharmaceuticals are much more unnecessary than they would be if the products were intended for the general retail over-the-counter market.

Summing up, FDA, particularly officials whose activities concern primarily drugs, has been charged with maintaining a hypercritical attitude with respect to such matters as the names of products, labeling, therapeutical claims, and otherwise. As indicated above, a large amount of research work has been and is being carried on by FDA in certain lines. However, on the other hand, some drug conclusions and rulings of FDA have been described by persons who should be in position to know as being based either on incomplete evidence or on what has been called "desk evidence," without adequate research, consultation or consideration, but resting primarily upon personal opinion, or prejudice or observation in one case or a very limited number of cases.

ALTHOUGH IT HAS BEEN RECOGNIZED for many years that a surprising number of bodily ills can be traced to infections of the teeth and gums, the care given to tooth brushes has always been extremely casual. A device which insures the sterilization of tooth brushes each time they are put away has now been invented. It is a small cabinet with racks to hold the brushes and a storage tank which will hold a year's



supply of antiseptic solution. Above the brushes are small nozzles, each of which automatically releases one drop of the antiseptic when the spring action door is closed. The inventor points out that the tray underneath the brushes can be used for dental plates.

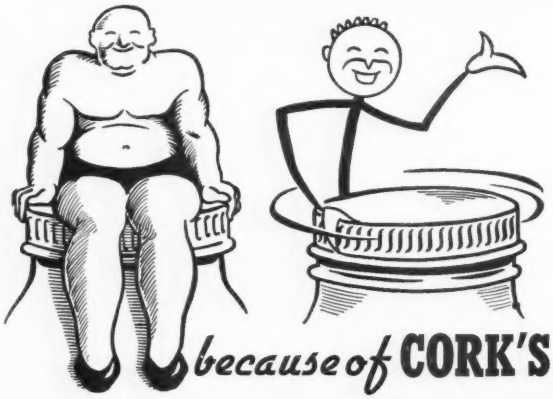
The sterilizer has been patented and the inventor is now looking for financing. We shall be glad to pass on to him any communications regarding it. He claims that he has already received an appreciable number of orders.

INSTITUTIONAL COPY PROMOTING THE BARBERS will be continued by Bristol-Myers Company in all their consumer advertising on Vitalis. Fine acceptance by the barbers of the country of this type of copy has caused the decision.

In every Vitalis advertisement is carried a box referring to the barber as "an expert in the care of scalp and hair." Reference is also made to the single application Sealtube which is now using for dispensing Vitalis in barber shops. The package eliminates substitution as well as being more sanitary.

An institutional theme along similar lines has also been introduced on the consumer packages of Vitalis. One end of the carton suggests that the consumer insist on the new sanitary, single application Sealtube when having Vitalis applied by barbers.

A TIGHTER SEAL —EASIER TO OPEN



because of **CORK'S**

Million Air Springs

When a CORK-LINED cap is screwed down tight, it stays tight because those millions of "air springs" of which CORK is composed are always trying to get back to their original size. They push against the sealing surface, holding the closure firmly in place. When compression is released, the same "Springback" permits the cap to be removed easily, quickly. If you want to be sure of safe delivery and increased consumer satisfaction, insist on CORK-LINED closures.

FREE! A comprehensive booklet, "CORK—THE *LIVE* LINER" is yours for the asking. Send for a copy today.

Make this Springback Test

Press your thumbnail well into a cork liner. Feel its ready "give". Then release the pressure—feel the cork spring back. Now try this test on any other type of liner, and your own hand will tell you why CORK provides a tighter, safer seal.

CORK INSTITUTE OF AMERICA

25 WEST 43rd STREET NEW YORK, N. Y.

FOR BETTER CAPS-USE **CORK** THE LIVE LINER

BOTTLES and JARS

- A full line of bottles and jars always in stock for immediate delivery.
- Available in small or large quantities. Jars: Clear, Opal or Colored, in all standard sizes—any quantity from stock.
- Perfume bottles, standard moulds or special design.
- Lotion bottles—many very attractive designs for your immediate use.
- Bottles and jars with and without caps. Let us quote on any size order for any type of bottle or jar.

HAGERTY BROS. & CO.
10 PLATT ST., NEW YORK CITY

RIEGELINE

FOR

TRANSPARENCY

WITHOUT EXPENSE

Riegeline is a newly developed product, combining the economy of ordinary glassine with the transparency of more expensive wraps. It twists well, works rapidly on any wrapping machine, and will not expand in wet weather or shrink to the splitting stage in dry weather.

LIBERAL SAMPLES AND PRICES PROMPTLY FURNISHED

RIEGEL PAPER CORP.

342 Madison Avenue · New York

No. 21

No. 41

No. 44

No. 774

Here is a representative assortment of our exclusive designs. These are made of the highest quality, crystal clear, glass bottles. The caps are black bakelite in which we attach the correct liner and genuine quill camel hair brush or metal shank brush to order.

WRITE FOR SAMPLES AND PRICES

GLASS PRODUCTS CO.

GLASSWARE

VINELAND ● NEW JERSEY

ATLANTA, GA. Warren M. Curry 2895 Peachtree St.

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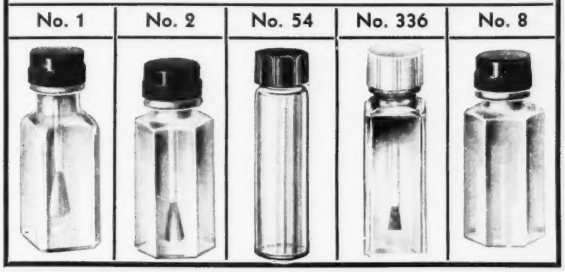
CHICAGO, Ill. E. Marx & Co. 308 Washington St.



No. 1 | No. 2 | No. 54 | No. 336 | No. 8

ARTISTIC

Imported Perfume Bottles

will stimulate and greatly increase the sale of your Perfumes.

Series 400—⅛, ¼, ½, 1, 2oz.
★ FINEST OF CRYSTAL
★ HIGHLY POLISHED

Series 320—½, 1, 2oz.
★ MODERN STYLES
★ FULL-CUT

SPOT STOCKS — IMPORTS — PRIVATE MOLDS

At Prices Surprisingly Low

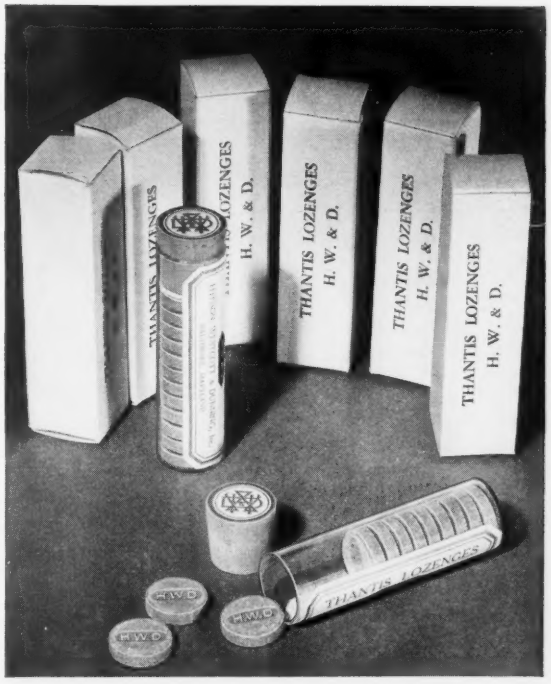
THE SUDBURY COMPANY

309 Fifth Avenue, New York, N. Y.

Visit our Showrooms and view the Largest Collection in America

DODGE *Closures*

Designed to Guard the Integrity of the Contents



REPUTATION

THE name of Hynson, Wescott & Dunning, Inc. has long been established with the medical profession. Doctors who prescribe Thantis Lozenges do so with an assurance that every package will conform with the strictest standards in every respect.

The closure used on each Thantis Lozenge bottle is a Dodge Cork, true to size, true to grade—like every Dodge Closure, truly "designed to guard the integrity of the contents."

Talk to Dodge about your closures. You will find the Dodge representative experienced, intelligent, helpful. DODGE CORK COMPANY, INC., LANCASTER, PENNA.

CORKS · MOLDED FLANGE CORKS · MOLDED QA CAPS

GIVE YOUR PACKAGE THE *sales allure* OF A DECORATIVE CLOSURE

PACKAGES topped with colorful Armstrong's Metal Caps or Jar Covers have a decided competitive advantage that helps increase sales. On the Jean Nolan packages illustrated at the right, Armstrong's Double-Shell Jar Covers, lithographed in orange with the trade-mark in black, harmonize perfectly with other units of the package. The effect combines outstanding display value, quality, and charm.

Armstrong's Metal Caps and Jar Covers are available in a wide range of colors in both single- and double-shell types. Either type may be specially lithographed at small additional cost, with your private design or trade-mark. In addition to beauty, these caps provide a secure seal for your product and are easy to remove and replace.

Armstrong's Closures also include: Artmold (molded plastic) Caps, Corks of all types, and Crown Caps. As secondary closures, Armstrong sells du Pont "Cel-O-Seal" caps and bands. For complete information send for the illustrated booklet "Better Seals for Better Sales." Armstrong Cork Products Company, Closure Division, 913 Arch Street, Lancaster, Penna.

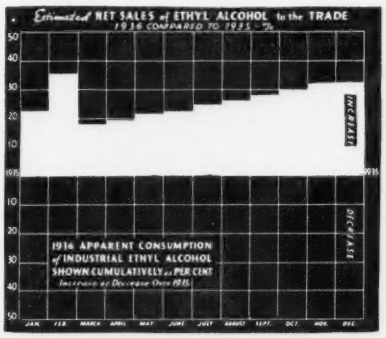
★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

Armstrong's METAL CAPS

ADVERTISEMENT—*This entire page is a paid advertisement.* *Prepared Monthly by the U. S. Industrial Alcohol Co.*

ALCOHOL NEWS

March ★ A Monthly Series of Technical Articles for Chemists and Executives ★ 1937


Estimated NET SALES of ETHYL ALCOHOL to the TRADE
1936 COMPARED TO 1935 - %
INCREASE
DECREASE
1935
1936 APPARENT CONSUMPTION of INDUSTRIAL ETHYL ALCOHOL SHOWN CUMULATIVELY, in PER CENT
Increase or Decrease Over 1935
JAN. FEB. MARCH APRIL MAY JUNE JULY AUGUST SEPT. OCT. NOV. DEC.

Apparent consumption of industrial ethyl alcohol from Jan. 1 to Dec. 31, 1936, was 81,386,000 wine gallons. This is 33.5 per cent greater than during the same period in 1935 when 60,951,000 wine gallons were consumed.

ETHYL ESTERS ARE AIDS IN STUDY OF KETONURIA

In studying the ketosis induced in rats by the administration of certain ethyl esters, four chemists using ethyl acetoacetate controls were able to throw fresh light on the mechanism of ketonuria.

While the administration of ethyl acetoacetate, butyrate or caproate to fasting rats resulted in a uniform ketonuria lower than that produced by the corresponding sodium salts, more than double the ketonuria was observed after use of the ethyl esters of caprylic, capric, lauric and myristic acids.

Formation of Acetone Bodies

To explain this, it was suggested that two fragments capable of forming acetone bodies are produced per molecule of fatty acid. Likewise, with the ethyl esters of palmitic, stearic and oleic acid, it was thought that these fatty acid molecules must break up into at least three fragments per molecule.

Since ethyl caprate was observed to be as good a ketogenic agent as ethyl caprylate, this was taken as indication that its chief method of oxidation is to acetone bodies rather than to the dicarboxylic acids as postulated by previous workers.

SOLOX IS USED TO CLEAN ELECTRICAL EQUIPMENT

Cleaning motor windings and other electrical equipment has been suggested as a new use for Solox*. According to "Power" magazine, water must never be used for this purpose. After loose dirt has been blown out by compressed air, the remaining oil and dirt can be loosened with Solox. An ordinary hand fire extinguisher may be used to apply the Solox. A second application of the air blast removes the loosened dirt.

Reasonable care should be practiced when using Solox in a confined space or near a flame. Under ordinary conditions it is a convenient, quick, and inexpensive fluid, evaporates readily and leaves the machine ready for service immediately after cleaning.

* Proprietary alcohol-type solvent manufactured by U.S.I.

An obdurant to sensitive dentine—i.e., a drug to deaden pain in the teeth—was reported recently. It is described as a mixture of thymol 4 drams, benzocaine 28 grains and methyl acetone 52 minims.

RING FREEZING GIVES PURER FRUIT JUICES

Freezing in Annular-Cell and Centrifuging Is Said To Speed Water Removal

Interest in the concentration of food and beverage products was revived recently by the announcement of an improved process for dewatering by freezing. When the ice crystals are allowed to grow in an annular or ring-shaped cell a texture of slush is said to result which greatly aids separation of the ice by centrifuging. A more concentrated extract and purer water melt is obtained, according to reports.

Application to Grape Juice

When the process was first industrially applied (to grape juice) the water from the melted ice was found to have valuable medicinal properties. A number of European clinics are now making tests to determine the therapeutic value of this product from grapes.

The newly-developed process involves freezing the juice at —13 deg. F., followed by centrifuging. This may be repeated once or twice, according to the concentrate desired.

MODIFY ESTIMATION OF FREE ALKALI IN SOAP

Authors Report Special Solvent Mixture Gives Sharper Endpoint

By dissolving soap in a special solvent mixture composed of 100 parts of benzene, 75 parts of alcohol, and 2½ parts of water by volume, the authors of a new method for the determination of free alkali in soap report a sharper endpoint.

Titration is carried out at room temperature with n/10 acid and phenolphthalein as the indicator. While the new method gives initial results differing from those provided by the

(Continued on next page)

DIBUTYL OXALATE IS NEW U.S.I. PRODUCT

Companion to Diethyl Oxalate Is Useful in Organic Synthesis And as Special Solvent

With the addition of Dibutyl Oxalate to its line, U. S. I. now offers a companion product to its Diethyl Oxalate.

Like the latter product, dibutyl oxalate is an intermediate in chemical manufacture as well as a solvent for specialized uses. Compared with Diethyl Oxalate, it is characterized by a much higher boiling range, lower water solubility and less density.

Three grades having ester contents of 90 per cent, 95 per cent, and 99 to 100 per cent respectively are available. The specifications for the 99 per cent grade are as follows:

ACIDITY (Free acid as oxalic), Not more than 0.05%
COLOR ..... Water White
DISTILLATION RANGE:
Below 240° C..... Not more than 5%
Below 248° C..... Not less than 90%
Above 255° C. ..... None
DRYNESS—Miscible without turbidity with 20 vol. 60° Be. gasoline at 20° C.
NON-VOLATILE MATTER— Not more than 0.005 g./100 cc.
ODOR ..... Mild
PURITY—Ester content as Dibutyl Oxalate, Not less than 99%
SPECIFIC GRAVITY at 20/20° C., 0.989-0.993
WEIGHT PER GALLON at 20° C., 8.24 lbs. (approximate)
BLUSH RESISTANCE at 90° F. (10% R.S. ½ sec. Nitrocellulose Solution) Clear at 90% Relative humidity.
COEFFICIENT OF EXPANSION:
Per 1° F..... 0.00053
Per 1° C..... 0.00095
DILUTION RATIO (Nitrocellulose Method):
With Toluol..... 2.3
With Petroleum Naptha..... 1.0
FLASH POINT..... 265° F. (approximate)
VISCOSITY expressed in centipoises (10% ½ sec. nitrocellulose solution) 800
WATER SOLUBILITY: At 25° C. 100 cc. solvent dissolves 0.5 cc. water.

PART OF U. S. I. ESTER DISTRIBUTING SYSTEM

From the above scene at the Baltimore plant of the U. S. Industrial Chemical Co., Inc., leave tank cars carrying U. S. I. ester solvents to all parts of the country. Pioneering in the manufacture of esters and other solvents, U. S. I. has been steadily augmenting the number of such products. Dibutyl oxalate is U. S. I.'s latest ester development.

ADVERTISEMENT—*This entire page is a paid advertisement.*

MANILA SCIENCE BOARD SCANS CINCHONA CROP

Fear Effect of Plant Disease On Malaria Drug Cultivation

At least 10,000 kilos of cinchona bark have been harvested from the government-sponsored project in the Philippine Islands, according to a report by the Chemical Division of the Bureau of Foreign and Domestic Commerce. The growing of cinchona trees in the Province of Bukidnon, started in 1927, was gradually enlarged until there were at least 88,000 trees. At present only about 39,000 from 2 to 7 years old are left and there are about 110,000 seedlings, from 2 to 6 months old.

Affects Bark

It is feared that the same plant disease that destroyed the coffee industry may reappear and affect the cinchona plantation. The bark of trees affected by this disease is utilized for the manufacture of totaquina, a new Philippine medicine for treating malaria.

The Bureau of Science at Manila reports that Philippine cinchona has a higher alkaloidal content than barks obtained elsewhere.

VIENNA ANNOUNCES NEW TECHNIC FOR SPRAINS

Immediate relief from the pain of mild sprains is obtained by a new method of treating such injuries, according to two Viennese doctors. The technique of one is first to freeze the painful region with ethyl chloride and then have the patient perform the movements he previously found impossible.

The mildly frozen skin is greased and the patient continues the exercise at home, three or four times a day, using alcohol and steam compresses for anesthesia.

Hypodermic injections of 12 to 25 cc. of 1 per cent novocaine solution is substituted by the second physician for the ethyl-chloride freezing treatment. The rest of the procedure is substantially the same.

A folder giving the history and uses of industrial alcohol, a pictograph of its manufacture and a summary of government regulations has been prepared by U. S. I. Write for your copy.

New Lab Use For Solox

Boring holes in rubber stoppers may be simplified by using Solox, U.S.I.'s proprietary alcohol-type solvent, as the lubricant. Experimenting with the usual lubricants, glycerine, alkali and soap solutions, one technician found that alcohol was most satisfactory since it evaporated quickly leaving a clean dry stopper.

Alcohol Is Heat Transfer Fluid in New Radiator

Taking advantage of the good heat-transfer characteristics of alcohol, an "alcohol steam radiator" has been developed. One or two pints of alcohol are placed in a "bottle" which takes the place of the cut-off valve on an ordinary radiator. The alcohol is vaporized and heated by a live steam jacket enclosing the bottle, then flows through the radiator where the alcohol vapor condenses and falls into a small reservoir beneath the radiator. By suitable mechanism, the liquid alcohol is returned to the bottle for reheating.

Advantages claimed for the device are elimination of valves and smoother regulation of radiator temperature; both said to be important in air-conditioning installations.

MODIFY ESTIMATION OF FREE ALKALI IN SOAP

(Continued from preceding page)

A.O.C.S. method, the absolute alcohol and the barium chloride methods, it is asserted that all four analyses may be made to agree if corrections are made for the solubility of sodium carbonate in the various solvents and for the temperature coefficient of the endpoint.

It is said that the new method also has the advantage of allowing removal of soap builders, exclusive of sodium silicate, by centrifuging, thus eliminating any effect on the free alkali such as may be experienced in filtration procedures.

FOOD INDUSTRY WATCHES MOVE TO STERILE AIR

Sterile air at a reasonable cost is now available to food manufacturers according to the patentee of a process for sterilizing air by compression and expansion. Beverage bottlers, confectioners, syrup makers and many others have long known of the advantages of sterile air for transferring and agitating liquid foods but the cost has heretofore been prohibitive.

Uses Expanding

Although this sterilization process has been used by breweries and dairies for a number of years, it is only now being introduced to the food industries.

The method consists of compressing air to about 45 lbs. per sq. in. with subsequent expansion through several successive steps to about 37 lbs. per sq. in. The sterilization unit used in one brewery consists of four expansion tanks 8 ft. high and with 6, 8, 10 and 24-in. diameters respectively connected in series and three sterile air reservoir tanks with connecting pipes and needle valves to regulate the flow of sterile air to each tank as well as to each department in which it is to be used.

TECHNICAL DEVELOPMENTS

The items in this column are gathered from many varied sources. Further information may be gathered by writing to U.S.I.

"Gold plate," various blue, green and red effects are said to be imparted to lacquered articles by means of a novel dipping water dye. It is reported that the shades obtained may be varied by regulating the period of immersion in the dye solution. Safety razors, novelty jewelry and ornamental articles are listed as some of the applications.

U S I

Heather perfume, a new type aroma for use in both creams and perfumes, was recently placed on the market. It is said to be particularly useful for covering raw materials and to provide a pleasant, lasting aroma as well.

U S I

A portable pressure-spray cleaning machine is now available. The unit is said to deliver a steam-heated solution under pressures ranging from a penetrating spray to a solid stream of water.

U S I

A synthetic wax said to have the characteristics of carnauba wax was announced recently. It is reported useful for making stable water-wax emulsions which leave a hard, water-resistant, transparent film when coated on a clean surface.

U S I

Uniform granules or nodules are formed from damp or dry products by a new oscillating granulator, according to the manufacturer. The new machine is said to be particularly useful in conditioning filler cakes before drying and for coarse grinding of certain chemical powders.

U S I

Pearly effects in vanishing creams are more easily produced with a new chemical, according to the manufacturer's announcement. It is described as an entirely neutral, water-insoluble and non-irritating material, which melts at 43 deg. C.

U S I

An improved vacuum filler recently introduced is reported to have many advantages. Among these are faster filling, flexible capacity (a second filling head can be added if desired), less overflow and no dripping.

U S I

A new seasoning of vegetable origin for sausages and prepared meats has been developed. According to the manufacturer, the vegetable material improves taste and flavor, prevents acidity and increases food value.

U S I

An extrusion press now on the market is said to be useful for extruding eyebrow pencils, suppositories, etc., on a small scale.

U S I

A smooth, invisible film is said to form on the face when a newly patented liquid is used. The cosmetic preparation consists of three parts of fresh, uncooked egg albumen and one and a half parts of 70 per cent alcohol.

U.S. INDUSTRIAL ALCOHOL CO.

WORLD'S LARGEST PRODUCERS OF INDUSTRIAL ALCOHOL

ETHYL ALCOHOL

SPECIALLY DENATURED–*All Formulas* • COMPLETELY DENATURED–*All Formulas* • ANHYDROUS–*Denatured* • ABSOLUTE–*Pure*

SOLOX–*The General Solvent* • U. S. DENATURED ALCOHOL • SUPER PYRO *Anti-Freeze*

PURE (190 PROOF) TAX PAID—TAX FREE

U. S. I.—U. S. P.–*Ethyl* • WEBB'S–*Ethyl*

Executive Offices: 60 East 42nd Street, New York, N. Y. Branches in all Principal Cities.

NEWS

J. A. Huisking Heads Drug Club

The following officers have been elected by the Drug and Chemical Club, New York: president, Joseph A. Huisking, of Charles L. Huisking & Co.; vice-president, Edward J. Sisley; secretary, J. L. Powell; and treasurer, A. A. Teeter, of Charles Pfizer & Co. New members of the board of governors, elected to fill vacancies made by the retirement of three members are: William D. Barry, of the Mallinckrodt Chemical Works, H. B. Lamy, Jr., and H. W. Rogers.

A.D.M.A. Meeting

The twenty-sixth annual meeting of the American Drug Manufacturers' Association will be held at the Homestead, Hot Springs, Va., May 3 to 6.

Meetings of the Scientific and Biological Sections will be held at 9 A. M. on May 3; meetings of the Pharmaceutical and Crude Drug Sections will be held at 3 P. M. May 3. The first general session of the Association will be held at 9 A. M., May 4, and the Annual Dinner will be Wednesday evening, May 5.

Reservations for rooms during the meeting should be secured from George Slosson, Jr., General Manager, The Homestead, Hot Springs, Va.

Chicago Ass'n Committees

At a luncheon meeting of the Chicago Perfumery, Soap and Extract Association held at the Lakeshore Athletic Club, March 2, Robert D. Hall, a recent student of the University of Alaska, showed an interesting series of motion pictures showing "Modern Alaska."

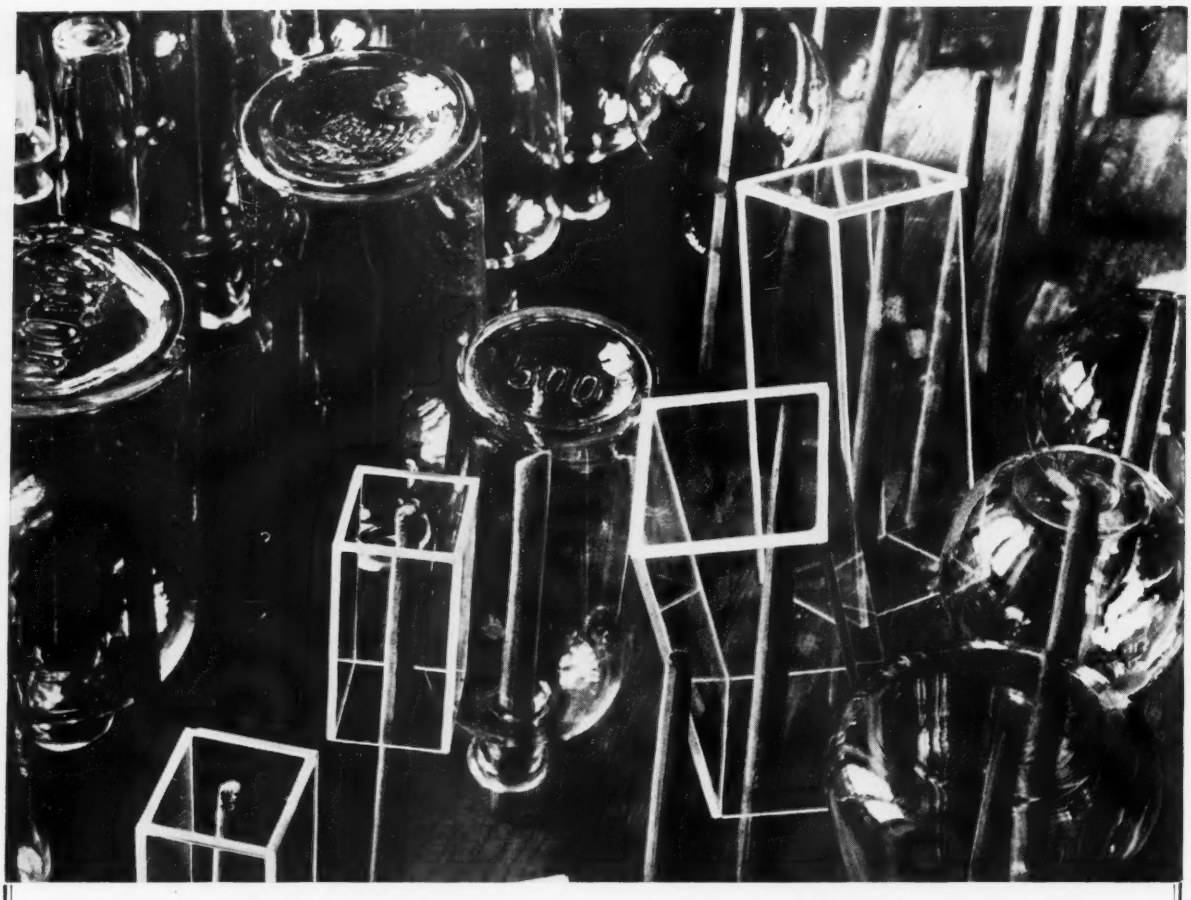
T. E. Hanshaw, new president of the association, has announced that the following committees have been elected for 1937: Executive—T. E. Hanshaw (chairman), W. Kedzie Teller, M. B. Vance, George A. Wrisley, J. H. Helfrich; Membership—A. A. Baffetti (chairman), Dudley F. Lum, Philip L. Blazer, George H. Woods, J. DeLorme, H. G. McKay, S. J. Vance; Luncheon—A. F. Frantz (chairman), Wm. H. Schutte, Edgar E. Brand, Frank Z. Woods, J. A. A. Scott; Golf—A. J. Anderson (chairman), R. L. Holland, E. F. Smith, Ralph C. Jennings, J. T. James; Legislative—George A. Wrisley (chairman), J. H. Helfrich, Dr. J. B. Montenier, M. G. Neumann, F. T. Gordon, Dr. B. T. Roberts; Entertainment—Walter H. Jelly and A. F. Frantz (co-chairmen), Russell G. Brown, Chris. Christensen, J. A. Gauer, L. A. Solo, D. M. Clark; Publicity—Thomas Morgan (chairman), J. A. A. Scott, Stanley S. Petrulis, Walter R. May, Harry J. Hoole; Bowling—A. M. Burgh (chairman), Harry Spohr, J. A. Loffredo, Ray A. Morris, Jos. DeLorme.

Albek Wins Award

A the second annual Associate Members' Dinner held by the California Cosmetic Association, February 10, at the Elk's Temple Los Angeles, some very interesting and unusual displays were exhibited by the suppliers to the cosmetic industry.

A committee of prominent cosmetic

DINNER OF CALIFORNIA COSMETIC ASSOCIATION



The slight differences in color of high-grade white oils can frequently be ascertained only in special glasses manufactured particularly for this purpose.

FLAG BRAND
WHITE OILS

The U. S. Pharmacopoeia specifies that Liquid Paraffin (Russian Mineral Oil) must be a "colorless, transparent oily liquid, free, or nearly free, from fluorescence."

Therefore the refiners of our FLAG-BRAND Genuine Russian White Mineral Oils pay particular attention to the color, which must be waterwhite, and also to cloud and pour tests, so that even cold weather will not affect the liquidity and the clear appearance of the oil.

Other U.S.P. requirements which are rigidly tested during the manufacturing process, are specific gravity, viscosity, odor, taste, opalescence (moisture and solid paraffins), acid, alkali, sulphur compounds and carbonizable substances.

Our FLAG-BRAND oils, made by one of the oldest and best known European white oil refiners, meet or even surpass all these requirements.

Insist on the "Genuine Imported Russian Oil" and protect yourself by buying only from original importers or from legitimate dealers.

S. Schwabacher & Co., Inc.

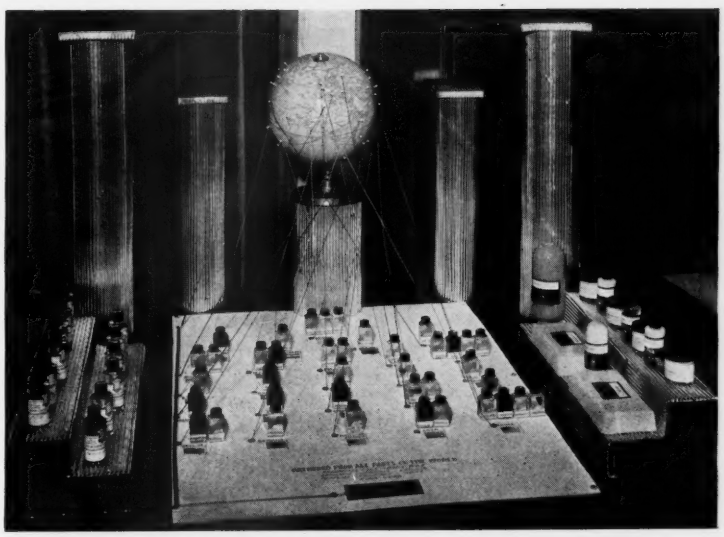
25 Beaver Street
New York

Cable Address: Oiltanker

Telephone: HAnover 2-2538-2539

manufacturers headed by Mr. Willats of Colonial Dames, judged the exhibits and unanimously awarded first prize to Albert Albek, Inc. The award was a pair of handsome bronze and onyx book-ends, suitably inscribed. The Albek display, as the picture illustrates, shows the many raw materials handled by them, and their sources.

The dinner, which was attended by representatives of all the trade, was the most successful event held by this very progressive association to date. There was little speech-making, and lots of good entertainment, and the star of the evening was the genial Associated Oil Fred Stolle, who acted as master of ceremonies with all the aplomb of Jack Benny.



PRIZE WINNING EXHIBIT OF ALBERT ALBEK, INC.

Mackelcan—Innis, Speiden, Sec.

H. G. Mackelcan has been elected secretary of Innis, Speiden & Co. to succeed C. L. Speiden who recently resigned from the company. Mr. Mackelcan has been with the company for twenty-nine years, starting as a junior clerk. In 1936 he was made general sales manager and in 1927 he became vice-president in charge of sales.

Burgund Advanced by Carr-Lowrey

A. C. Burgund has been appointed manager of the New York office of Carr-Lowrey Glass Co. He has been assistant manager of this office for the past ten years and recently completed twenty-five years with the company.

C. L. Huisking Returns

Charles L. Huisking, of Chas. L. Huisking & Co., returned on February 20 from a trip to Europe. While there, he visited England, Norway and Germany. He returned on the steamer Manhattan, accompanied by Mrs. Huisking.

Bannon Joins Grove Labs.

H. J. Bannon, for ten years chief chemist for Strong, Cobb and Co., has been placed in charge at Grove Laboratories, Inc., St. Louis, where several new products are now being developed under his supervision. At one time, Mr. Bannon was development chemist with McKesson & Robbins in Bridgeport.

Starr—Sharp & Dohme Director

Edward Starr, Jr. has been made a director of Sharp & Dohme, Inc., Philadelphia, succeeding Thomas Newhall who recently resigned.

Loeffler Advanced by Monsanto

A. T. Loeffler, who became associated with Monsanto Chemical Co. in a sales capacity several months ago, has been appointed assistant manager of Monsanto's eastern district office at 30 Rockefeller Plaza, New York.

Charabot to Visit Ungerer

Ungerer & Co., American and Canadian representative for Charabot & Co., Grasse, France, announces that Eugene Charabot will soon be at its New York offices on his annual business trip to this country. M. Alexandre Klaguine recently became head of the company, which is this year celebrating its 120th anniversary.

Helena Rubinstein Returns

Madame Helena Rubinstein returned to New York, February 24, after an extensive tour of Europe.

Shaw Official of Mennen

Announcement has been made that Oliver Shaw, foreign sales manager of the Mennen Co., Newark, N. J., has been elected vice-president and director of the Compania Mennen de Cuba, Havana.

Rupert Joins Ansehl

A. A. Rupert, formerly with Johnson & Johnson, has been made eastern sales manager for the Benjamin Ansehl Co., St. Louis. He will make his headquarters in New York.

George Ellis Felton

Mr. and Mrs. Robert E. Felton announce the birth of a son, George Ellis, on January 30, 1937. Mr. Felton is the southern representative of the Felton Chemical Co., with offices in New Orleans.

Taylor on Amer. Inst. Board

Harden F. Taylor—president of the Atlantic Coast Fisheries, has been elected a member of the board of trustees of the American Institute of the City of New York.

Tarsaidze in New Venture

It has been announced by Alexander Tarsaidze, formerly with Prince Matchabelli, that he will be associated with a group of people organizing a new company for the purpose of creating a small, but complete line of French perfumes, cosmetics and other toilet articles. Prince Serge Obolensky will be associated in the new venture with Mr. Tarsaidze. Nicholas Starosselsky, nephew of Prince Georges Matchabelli, and former Matchabelli representative in the Middle West, will also be associated with the company.

Griffiths' Wedding Anniversary

During the cruise of the Associated Chain Drug Stores, Mr. and Mrs. Fred Griffiths celebrated their tenth wedding anniversary.

Johnson & Johnson Changes

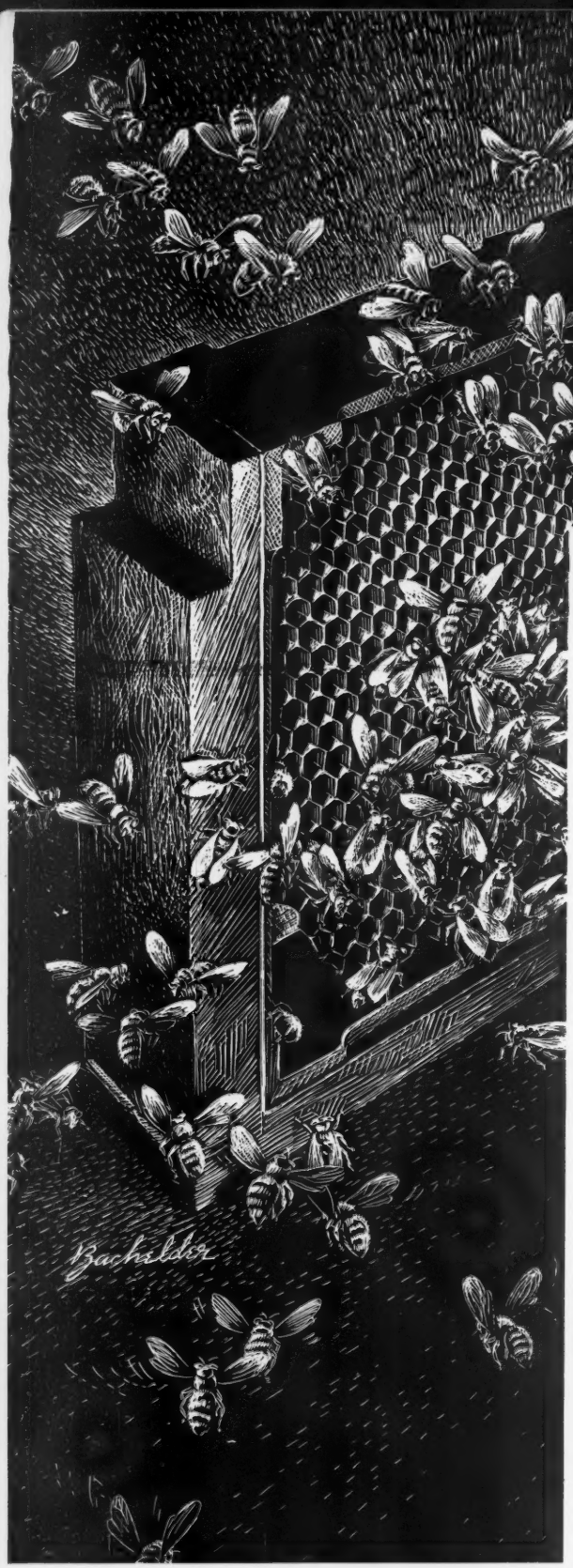
Johnson & Johnson, New Brunswick, N. J., has announced the appointment of D. J. Schiffeneder as manager of the company's New York division. For the past four years he has been manager of the company's Chicago branch. L. H. MacDougall will succeed him in Chicago.

Stuart Gets More Duties

Martin M. Stuart, manager of the Colgate-Palmolive-Peet Co., Jersey City, has been appointed manager of the industrial sales department in addition to his present duties, succeeding Arthur F. Danz who has resigned.

Pandora Products Formed

Pandora Products, Inc., Detroit, has been formed by George M. Dwelley and Paul Henzem to manufacture and sell medicinal products.



Construction TECHNIQUE

A big build-up to impress the public with the merits of your product, but . . . what then? To guarantee 100% consumer satisfaction, pack your product in HINDE & DAUCH corrugated shipping boxes . . . the best money can buy . . . quality materials . . . skilled workmanship . . . modern machinery. It's a real source of satisfaction to know that your shipping boxes embody all of the latest developments in modern shipping box engineering and construction. « « «

HINDE & DAUCH Corrugated Shipping Boxes

H&D *Protects in Transit*

THE HINDE & DAUCH PAPER COMPANY
155 DECATUR STREET SANDUSKY, OHIO

Send me your FREE book, "Modern Shipping Boxes"

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Company_____

Address_____ City_____ State_____

Drug Trade Dinner

The Twelfth Annual Dinner of the Drug, Chemical and Allied Trades Section *of the New York Board of Trade, by* far topped all previous dinners in attendance. *The dinner, held at the* Waldorf-Astoria Hotel on March fourth, was attended by *1,900 men in the drug, chemical,* cosmetic and related industries. The attendance this year was swelled by large groups of executives of manufacturing concerns from cities remote from New York. Also there was a marked increase in the number of cosmetic firms represented with their own parties, as well as a marked increase in the number of chemical executives.

A. Kiefer Mayer, of Kiefer-Stewart Co., was toastmaster of the dinner, being introduced by Joseph A. Huisking, Chairman of the Drug, Chemical and Allied Trades Section. Mr. Mayer introduced John J. Bennett, Jr., Attorney General of the State of New York, who delivered a most interesting address.

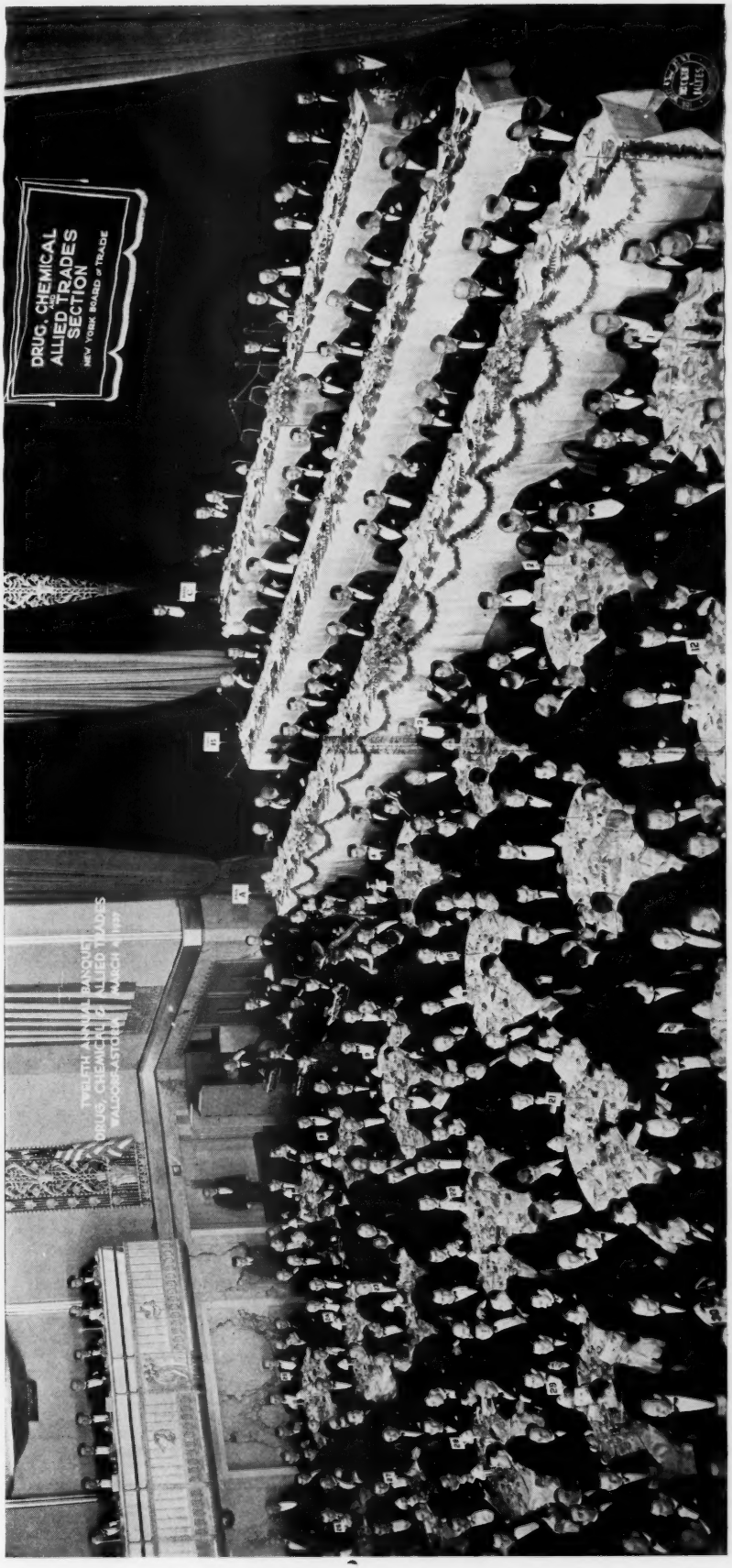
JOSEPH A. HUISKING

Entertainment was provided by the Program Committee which was under the chairmanship of R. D. Keim, of E. R. Squibb & Sons. The Reception Committee, under the chairmanship of Joseph M. Wafer, of Industrial Chemical Sales, did excellent work in introducing those who had not attended before, and in aiding guests to meet men whom they did not know by sight.

The dinner again proved its place as a national institution in the industry in the opinion of practically all in attendance. Numerous cocktail parties and entertainment were provided in various suites throughout the hotel, and these continued after the dinner to the early hours of the morning.

The usual cocktail parties by a large number of companies in the industry preceded the dinner, as well as the general reception furnished by the dinner committee. After the dinner, these parties were continued until the small hours of the morning. Many of the parties had entertainment before and after the dinner.

The dinner completely filled the entire ballroom and all the boxes and corridors. The problem again arises what to do next year if the dinner continues to grow.



Announcing

Kolmar Laboratories announce the opening of a new Eastern plant, located at 101-108 River St., Hoboken, N. J.

Because we are never satisfied with less than the best. Just as we use constant research to improve Kolmar products, so our business office is critical of Kolmar service. This is why we now open an Eastern plant. We hope thereby to present the maximum of efficient service for the East Coast as well as for the rest of the United States.

Kolmar laboratories
MILWAUKEE

Manufacturers of Serrate Puffs, Perm Indel Lipstick and Cream Rouge and Smooth as Silk Dry Rouge and Powder

These Kolmar Representatives will be pleased to serve you:

Chicago, Ill.
Norman Kole
11-108 Merchandise Mart

Atlanta, Ga.
Warren Curry
2895 Peach Tree Road

Los Angeles, Cal.
R. G. F. Byington
1709 W. 8th St., Room 504

Companies

National Oil Products Changes

Charles P. Gulick, president of the National Oil Products Co., Harrison, N. J., announces a reorganization of the industrial sales department of the company.

At the annual meeting the following officers were reelected: President, Mr. Gulick; vice-presidents, John H. Barton and Percy S. Brown; treasurer, Ralph Wechsler. G. Daniel Davis, former secretary, was elected vice-president in charge of industrial sales and Admiracion Laboratories, Inc., a subsidiary. Albert A. Vetter, formerly assistant secretary and assistant treasurer, succeeded Mr. Davis as secretary.

Thomas A. Printon, former assistant general sales manager, was appointed general sales manager of industrial activities.

The new set-up of the industrial sales department is as follows:

Textile department, Mr. Printon, manager; textile specialties division, C. J. Kenlan, assistant manager; textile rayon division, Dr. E. A. Robinson, assistant manager; paper division, G. R. Zust, assistant manager; specialties division, G. H. Small, assistant manager; division H. J. Gammon assistant manager. Admiracion department, Stanley I. Clark, manager; professional division of Admiracion, George Leithner, manager. Metasap division, metallic soaps, O. E. Lohrke, manager; Tanning division, B. A. Schiller, manager. Logan Grupelli will manage the industrial sales promotion department.

Lelong Injunction

Lucien Lelong, Inc., has obtained an injunction against Dermay Perfumers, Inc., in the U. S. District Court for the Southern District of New York, restraining Dermay from further infringing Design Letters Patents Nos. 91,504 and 92,827, which designs cover bottles and containers used by Lelong to package the perfume Mon Image. Damages are to be ascertained, and these together with costs of the suit are to be paid by Dermay.

Pinaud Protects Trade-mark

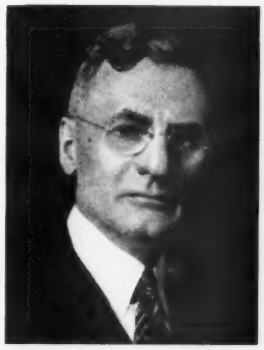
Pinaud, Inc., New York, has obtained an injunction against Everybody's Cut Rate Store in the New Jersey Chancery Court, Newark. The injunction enjoins Everybody's Cut Rate Store from selling an imitation shampoo as genuine Pinaud's Shampoo and from using Pinaud's trademarks "A La Corbeile Fleurie" "Pinaud" and "Pinaud's Shampoo."

Causby's Tan Remover

A company to be known as Causby's Tan Remover has been formed in Detroit. It will market a salve by that name which is recommended for the removal of tan, blackheads and skin blemishes.

Merrell Advances Executives

At a meeting of the board of directors of the Wm. S. Merrell Co., held in Cincinnati, February 23, the office of chairman of the board was created and Charles G. Merrell, president, was elected to fill the new position. At the same time



CHARLES G. MERRELL

Thurston Merrell was advanced from vice-president to president and general manager, and Lee Wiltsee from secretary and treasurer to vice-president and treasurer. E. A. Joering, former assistant treasurer, became secretary and W. J. Ransom, assistant treasurer.

THURSTON MERRELL

Other executives of the company are Walter G. Hodge, sales manager, Donald Merrell, advertising manager, T. A. Gatchell, export manager, T. H. Rider, scientific director and W. A. Smith, production manager.

Revson Offers Extended Colors

R. F. Revson Co., New York, has announced the production of extended face powder colors. As a base for these colors the company has used its Cosmetic Ochre R and Cosmetic Pink B. These colors have each been dispersed in 9 parts of the finest talc and it is reported that they can be added directly to the face powder ingredients in a mixer and sifter. A combination of these two colors will produce, according to Mr. Revson, practically any of the popular shades of face powder.

N. J. Machine Adds to Staff

The New Jersey Machine Corp., has appointed two new sales engineers, working from the Hoboken office: Richard Dede and Richard Wellbrock. While these two men were appointed to the staff at the first of the year, formal announcement was not made owing to the desire on the part of the management to get them thoroughly posted on the New Jersey Machine Corp. policies and particularly on the new Pony Labelrite. The Pony has practically made the appointment necessary. Inquiries have been coming in for information faster than they could be handled.

Pharma-Craft's New Plant

The Pharma-Craft Corp., manufacturers of "Fresh" have opened a new office and factory at 113 W. Hubbard St., Chicago. Charles Howell is in charge of the new plant. The company has announced that two new products will soon be put on the market.

Monsanto Subsidiary Builds

A new laboratory building is being built at Dayton, O., for the Thomas & Hochwalt Laboratories division of the Monsanto Chemical Co. The building which will house seven laboratories, a balance and instrument room and a lecture room will be devoted principally to work on physical-chemical projects.

Prentiss Increases Milling Facilities

R. J. Prentiss & Co., Inc., New York, importer and miller of botanical drugs and insecticide materials, has increased and consolidated its milling and warehouse facilities at 261 King St., Brooklyn. The building which is on a railroad siding provides ample storage space. The milling department occupies a large section of the building and is a most complete installation with facilities for milling all kinds of crude drugs and botanical insecticides.

Ramel Expands

The Ramel Manufacturing Co., Inc. has enlarged its manufacturing facilities and taken over an entire building at 80-92 Third St., Brooklyn. The factory will be in charge of Leo Marder who was recently elected president of the company. Harry Meltzer, vice-president, will continue to devote his time to the sales department.

Zonite Buys Bacon's Emollient

Zonite Products Corp., has announced the acquisition of Bacon's Canadian Emollient, together with all copyrights, trade-marks and formula. The emollient is a skin lotion which is intended to soften and whiten the skin. Advertising and promotion of this product will be under the direction of W. C. House.

Bopf-Whittam Plans New Plant

Bopf-Whittam Corp., Westfield, N. J., has purchased a two acre plot of land on Elizabeth Ave., Linden, N. J., with over four hundred feet of railroad siding facilities along the main line of the Pennsylvania Railroad. Plans are being drawn for erection of a modern plant for the manufacture of lanolin and related products.

Mallinckrodt Prize Contest

The Mallinckrodt Chemical Works, New York, has inaugurated a contest to secure practical information on merchandising schemes for the prescription side of the retail drug business. The company will give $2,000 in prizes to the writers of letters on six subjects dealing with this phase of the trade.

Bonzene Marketed

The BonZene Products Co., Amasa, Mich. is now marketing "BonZene," an ointment which has been tested for several years in barber shops and beauty parlors. It is put up in one ounce tubes for general use and in larger packages for institutions. It is a remedy for eczema, scalp sores, facial blemishes, and various skin ailments, including burns, poison ivy and athlete's foot.

Loeb Equipment Supply Expands

The Loeb Equipment Supply Co., Chicago, expects to be settled about May 1 in larger quarters at 914-16 N. Marshfield Ave. The company is now consolidating its four warehouses and machine shop under one roof. At the new location Loeb will have a modern machine shop for reconditioning all types of equipment for the chemical, drug, cosmetic and allied fields, together with a testing laboratory.

Chemotherapeutic Booklet

Vincent Christina, Inc., New York, has issued a monograph entitled, "Clinically Approved Chemotherapeutic Agents." The booklet contains detailed pharmacologic and therapuetic information on the latest specialties of a chemotherapeutic background. Copies are available upon request.

Swedish Throat Pastilles

Strohmeyer & Arpe Co., New York, are now sole importers and distributors of the genuine Lakerol Swedish Throat Pastilles, manufactured by F. Ahlgrens Tekniska Fabrik, Gefle, Sweden.

Three Dreams Labs. Formed

Dr. Robert Greenidge, Colee B. Bryant and Barney F. Crawford have established the Three Dreams Laboratories, Inc. at 446 East Warren Ave., Detroit, to distribute a complete line of cosmetics.

Verley in New Plant

Albert Verley, Inc. is now in a new location in Chicago, the address of the main office and plant now being 1621 Carroll Ave. According to D. A. Bennett, president of the company, the new removal was

D. A. BENNETT

necessitated by a steadily increasing volume of business which has been gaining momentum for the past three years. According to E. J. Strobl, vice-president of the Company, in the new location there is

E. J. STROBL

ample room, and the equipment and facilities have been enlarged so that the organization is in a position to handle present business with greater dispatch and expedience.

The offices for the executives of the company are commodious and furnished in excellent taste.

Glyco Offers Lemenone A

Lemenone A. is offered by the Glyco Products Co., Inc., New York, to replace lemon oil completely in many cases, and in part for cosmetics, candies, cakes, beverages, ice creams. Because of its low price, it can be mixed with lemon oil and thus reduce the cost of the flavor or odor considerably.

New Nasal Lotion

Hervey W. Luce is heading a new company, the Sin-U-Thol Co., 208 First National Bank Bldg., Royal Oak, Mich. The company will manufacture a nasal lotion.

Dodge & Olcott Sales Meeting

All of the out of town salesmen and branch managers, with the exception of the Los Angeles representative, visited the New York office of Dodge & Olcott Co., during the week of February 8. Three business meetings were held and there was a banquet at the Hotel Lafayette on February 9.

William G. Moore, manager of the Chicago branch and F. C. Allen, treasurer of the company, were the guests of honor, one of whom has just completed fifty years of service with the company while the other is now in his fiftieth year.

McKesson Offers Cough Drops

McKesson & Robbins, Inc., has announced that Kigo Medicated Cough Drops, a five-cent item, are now offered as a companion product to Kigo Cough Syrup.

House of Windsor Cosmetics

Soap and other cosmetics will be manufactured by the newly formed House of Windsor, Ltd., 667 South Clarence St., Los Angeles.

Movies of Lipstick Making

The Warner Bros. moving picture company has taken the Charbert lipstick in the process of manufacture and made a short subject of it in Technicolor, calling it "Lip Service." This was released in 6,000 theatres early in March. The moving pictures show the process of manufacture from the mixing of the ingredients right through to the finished product.

N. Y. Q. Appointed Distributor

The Mathieson Alkali Works, Inc., New York, has appointed the New York Quinine & Chemical Works, Inc., Brooklyn, as its distributor for less-than-carload lots in the Metropolitan area.

International Emulsifiers in New York

International Emulsifiers, Chicago, are opening a New York office at 256 W. 31 St. Edward D'Argo, formerly of Procter & Gamble, is in charge.

Clarke Cosmetic Co. Formed

Harriet Clarke of Detroit has formed the Clarke Cosmetic Co. to market "Palace Garden" cosmetics.

Calsodent Moves

The offices of the Calsodent Co., Inc. have been moved to 215 Fourth Ave., New York.

Yardley Increasing Plant

Yardley & Co. is building a $100,000 addition to its plant in Union City, N. J.

MUGANTHEME

by--

Chuit, Naef & Cie

MUGANTHEME is truly the Lily of greatest utility. This modern Muguet base is being used with most pleasing effects and equally good results in perfume extracts, creams, powders of all types and lotions.

The Muguet note in modern perfumery has a much wider application than is generally supposed. It imparts a genuine sweetness and floralcy not otherwise obtainable to all types—florals, bouquets and orientals.

Currently, the decided popularity of floral bases recommends your consideration of Mugantheme. Have you tried it in that new perfume you are studying?

$16.50 per pound

Your Trial Ounce $1.25

Firmenich & Co., Inc.

135 FIFTH AVENUE - NEW YORK

...two markets..one t

ANALYZED REAGENTS

Baker's

FINE CHEMICALS

Baker's Analyzed Chemical Reagents

BAKER'S FINE CHEMICALS FOR

trademark..one result SATISFACTION!

In the laboratories of many of the foremost pharmaceutical manufacturers, you will find Baker's C. P. Analyzed Reagents. They have chosen these precision reagents, purity plainly labeled to the decimal, to safeguard their products and their precious trade-marks. No reagent with unknown limits of impurities will do.

When Baker entered the fine chemical field, supplying purity by the ton, it was only natural that these same companies should place their trust in an organization long schooled in exacting standards of purity.

Today these two markets feel the security of safeguarding their products with a single trade-mark — and with one result — satisfaction.

This satisfaction is reflected in the continual growth of the J. T. Baker Chemical Co. and the surge forward, year after year, of their fine chemical sales.

If, by chance, you have yet to discover the wideness of the Baker line of Fine Chemicals and their high quality standards, we would welcome the opportunity to place you on the Baker mailing list, or have you talk over your problems with a Baker sales representative.

ANALYZED REAGENTS — Baker's — FINE CHEMICALS

A partial list of Tonnage Fine Chemicals held under rigid control, at no price premium.

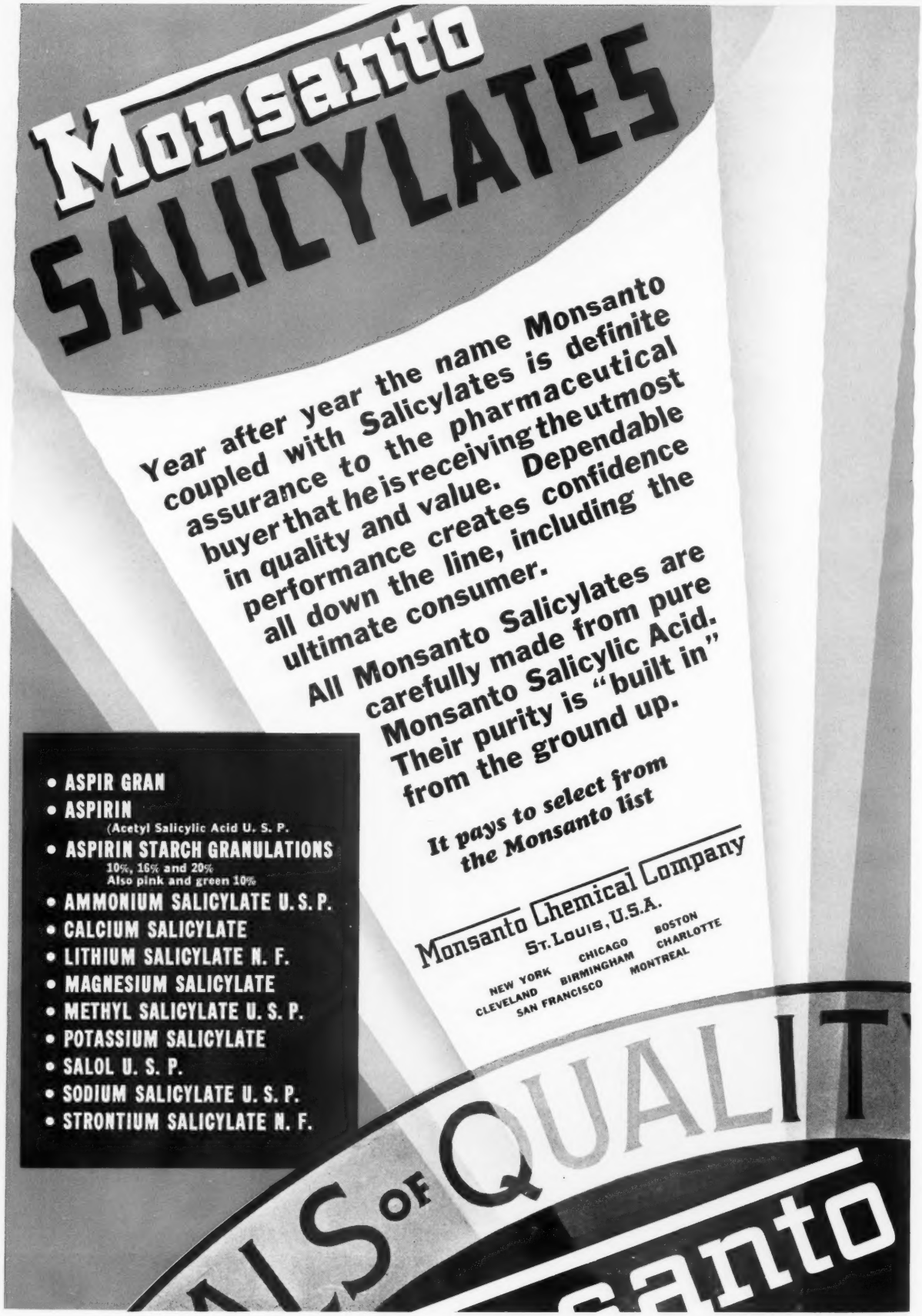
- Alkali Bromides
- Potassium Iodide
- Magnesium Oxide
- Cream of Tartar
- Bismuth Subcarbonate—Subnitrate and other Salts
- Caustic Potash and Soda Sticks and Pellets
- Rochelle Salt
- Lead Acetate
- Salicylates

Baker's Fine Chemical Sales have climbed rapidly every year since their introduction.

J. T. BAKER CHEMICAL CO., Phillipsburg, N. J.

NEW YORK 420 Lexington Avenue
PHILADELPHIA 220 S. 16th Street
CHICAGO 435 N. Michigan Avenue

PHARMACEUTICAL MANUFACTURERS


Monsanto
SALICYLATES
Year after year the name Monsanto coupled with Salicylates is definite assurance to the pharmaceutical buyer that he is receiving the utmost in quality and value. Dependable performance creates confidence all down the line, including the ultimate consumer.
All Monsanto Salicylates are carefully made from pure Monsanto Salicylic Acid. Their purity is "built in" from the ground up.
It pays to select from the Monsanto list
• ASPIR GRAN
• ASPIRIN
(Acetyl Salicylic Acid U. S. P.
• ASPIRIN STARCH GRANULATIONS
10%, 16% and 20%
Also pink and green 10%
• AMMONIUM SALICYLATE U. S. P.
• CALCIUM SALICYLATE
• LITHIUM SALICYLATE N. F.
• MAGNESIUM SALICYLATE
• METHYL SALICYLATE U. S. P.
• POTASSIUM SALICYLATE
• SALOL U. S. P.
• SODIUM SALICYLATE U. S. P.
• STRONTIUM SALICYLATE N. F.
Monsanto Chemical Company
St. Louis, U.S.A.
NEW YORK CHICAGO BOSTON
CLEVELAND BIRMINGHAM CHARLOTTE
SAN FRANCISCO MONTREAL
LS OF QUALIT
anto

Dedrick Heads Verley in N. Y.

A. J. Dedrick, recently appointed manager of the New York branch of Albert Verley, Inc., has had a long period of service in the essential oil, aromatic

A. J. DEDRICK

chemical, and perfume compound field. Mr. Dedrick was located at the main office of Albert Verley, Inc., in Chicago for a number of years, coming to the New York branch two years ago. He has a wide acquaintance in the industry.

Belanco Co. Cosmetics

The Belcano Co., 15 Exchange Place, Jersey City, headed by Alfred F. McCabe, will manufacture and distribute cosmetics.

Swan-Finch Moves

The Swan-Finch Oil Corp. is now occupying new offices at 30 Rockefeller Plaza, New York.

Bayne Laboratories Sold

D. E. Wiseman of the Bayne Laboratories, San Francisco, has announced that his company has acquired the business and good will of the company which was previously sold in 1932 by the owner and originator, C. W. Bayne. The new company is manufacturing a complete line of cosmetics using the formulas and trade names belonging to the original company.

A. M. A. Accepts

ICHTHYOL

Ichthyol, a brand of Ichthammol, N.F., manufactured by the Ichthyol Co., Rahway, N. J., (Merck & Co., Inc., Rahway, distributor) has been accepted by the American Medical Association.

RABIES VACCINE

Rabies Vaccine, manufactured by the Cutter Laboratories, Berkeley, Calif., has been accepted by the A. M. A.

BACTERIAL VACCINE MADE FROM THE TYPHOID BACILLUS

Bacterial Vaccine made from the Typhoid Bacillus, manufactured by the Cutter Laboratories, Berkeley, Calif., has been accepted by the American Medical Association.

McKESSON'S HALIBUT LIVER OIL WITH VITAMIN D

The American Medical Association has accepted halibut liver oil with added natural vitamin D obtained from cod liver oil and other fish liver oils, manufactured by International Vitamin Corp., New York (McKesson & Robbins, Inc., Bridgeport, Conn., distributor.)

A. D. A. Accepts

NOVOCAIN SOLUTION 2.2% WITH COBEFRIN

The American Dental Association has accepted Novocain Solution 2.2% with Cobefrin, manufactured by Cook Laboratories, Inc., New York, and Antidolor Mfg. Co., Inc., New York.

PROCAINE SOLUTION 2% WITH EPINEPHRIN

Procaine Solution 2% with Epinephrin, manufactured by Proco-Sol Chemical Co., Inc., Philadelphia, has been accepted by the A. D. A.

TRICALCIUM PHOSPHATE WITH SODIUM PYROPHOSPHATE, 2½% VICTOR

Tricalcium Phosphate with Sodium Pyrophosphate, 2½% Victor, prepared by Victor Chemical Works, Chicago, has been accepted by the A. D. A.

A. D. A. Rejects

DR. CHALMER'S EL-CRE-SOL FORMULA

The American Dental Association has rejected Dr. Chalmer's El Cre-Sol Formula, manufactured by the El-Cre-Sol Laboratories, Kansas City, Mo., because El-Cre-Sol is essentially no different than Debacterol, which has been the subject of a report by the Council.

BEECHNUT ORALGENE CHEWING GUM

Beechnut Oralgene Chewing Gum, has been rejected by the A. D. A. because no correlation has been proved between the so-called mouth acidity and either caries or pyorrhea. No one has brought forward evidence that the average mouth, to which undoubtedly such advertising as Oralgene is directed, will benefit by the continued chewing of chicle mixed with milk of magnesia.

N. J. Restricts Aspirin

After April 1, only druggists will be permitted by the New Jersey Board of Pharmacy to sell aspirin or products containing it. In its notice to merchants the board points out that aspirin is a drug and therefore can be sold legally only under the personal supervision of a registered pharmacist. This applies to aspirin tablets, powder, capsules, gum or aspirin preparations of any kind.

U. S. P. Vitamin B

U. S. P. board of trustees has a standard adsorption product containing Vitamin B_1, identical in character and potency with the International Standard for Vitamin B_1. *One International Unit of* B_1 represents the activity of 10 milligrams of *the International standard or of the* Pharmacopoeial standard adsorbates.

As only a limited quantity of the International Vitamin B_1 Standard was available the Pharmacopoeia has undertaken to supply this product for use in standardizing commercial products. All preparations claiming Vitamin B_1 activity should now express that potency in terms of International Units as determined by biological assay.

The Pharmacopoeial Reference Standard for Vitamin B_1 is packaged in 30 Gm. *units, priced at $1.00 each or $10.00 per* dozen.

F. T. C. Clears Sterling Products

The Federal Trade Commission has dismissed its suit against Sterling Products, Inc., New York. The complaint alleged that Sterling Products, Inc. which manufactures Phillips' dental magnesia and "Danderine" hair dressing had bought the capital stock of a competitor, the R. L. Watkins Co., manufacturer of Dr. Lyon's tooth powder and "Glostoria" hair dressing.

The complaint was dismissed because the evidence did not show that the purchase of the Watkins Co. had resulted in a substantial lessening of competition or restraint of trade.

Taxes Sought on Industry

OKLAHOMA

To take the place of the Oklahoma sales tax which will become void on June 30, a 10 per cent. tax on drugs and toilet goods is asked in a bill recently introduced in the Oklahoma Assembly.

MISSOURI

A bill which would levy a tax of 5 per cent. on toilet goods has been introduced in Missouri.

MAINE

Senator George F. Ashby of Aroostook, Me. is drafting a bill which would provide for a 10 per cent. tax on cosmetics and a 15 per cent. tax on tobaccos for presentation to the Maine legislature.

Connecticut Seeks Cosmetic Control

Bills which extend the authority of the Dairy and Food Commissioner over toilet articles, hair tonics, antiseptics and similar preparations not now legally covered by the term "drugs" are being considered by the Connecticut General Assembly.

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Rice Starch	Zinc Oxide French	Olive Oil	Irish Moss

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Humburg Joins Danco

C. F. Humburg, for many years in executive positions in the pharmaceutical branch of the industry, has joined G. J. Danco, Inc., New York.

Thirteen Little Dirrs

Peter A. Dirr, Vice-president of Chas. L. Huisking & Co., New York, became the father of his thirteenth child late last month. The latest arrival is a girl, and Peter seems pleased as usual.

Horney Organizes Firm

Charles J. Horney, who for a number of years has been associated with the essential oil and aromatic chemical industry, has organized his own firm on the Pacific coast to be known as Charles J. Horney Co., 1313 North Vermont Ave., Los Angeles. The company will offer the aromatic products of Naugatuck Chemical and its affiliates—Bruno Court, Grasse, France, Louis Bornand, Paris, France and Compagnie Africaine Des Plantes A Parfum, Casablanca, Morocco.

Drug Store Chain Sales Up

Total sales of chain drug stores in 1936 were 6.6 per cent. higher than in 1935, according to preliminary estimates of the Bureau of Foreign and Domestic Commerce. The greatest gain was shown by fountain sales, which were 13.3 per cent. higher; tobacco sales increased 4.8 per cent., and all other sales 5.2 per cent. from last year.

Abbott Earnings Increase

Abbott Laboratories shows a marked increase in sales and earnings over 1935. Volume of sales for the year ended December 31, 1936, exceeded 1935 by 27%. Net profits for 1936 were $1,415,276.02 as compared to $1,135,500.95 in 1935.

Directors on February 25 declared regular quarterly dividend of 40 cents and extra payment of 10 cents. This 40 cent declaration places the issue on a $1.60 annual basis as compared with $1.20 previously.

On March 1, stock of Abbott Laboratories was listed for the first time by the New York Exchange.

Amer. Home Products Earnings Up

Net income of the American Home Products Corp. and subsidiaries for the year 1936 amounted to $2,825,261. This is equal to $3.81 each on 741,060 shares of $1-par capital stock and compares with $1,729,708 or $2.57 each on 6,721,100 shares earned in 1935.

At the stockholders' annual meeting, April 8, a bonus plan will be voted upon. It calls for the creation of a bonus fund not to exceed 6 per cent. of that portion of the net profits for each quarter applicable to dividends, providing such portion equals not less than 60 cents a share of stock outstanding at the end of the quarter. The bonuses will be distributed to employees, including officers and directors.

Drug Firms Buy Bonds

Subscriptions and commitments obtained by the Drug Industry Committee for the New York World's Fair now total $105,000. The list of major subscriptions includes McKesson & Robbins, $25,000; Liggett Drug Stores, $20,000; Walgreen Drug Co., $10,000; Bristol-Myers Co., $5,000; Sterling Products, Inc., $5,000; Ex-Lax, $5,000 and Pennsylvania Drug Co., $2,500.

Sterling Products Earns More

Sterling Products, Inc. has reported for 1936 net earnings of $8,669,061, equal to $5.05 each on 1,715,563 outstanding shares, compared with $8,308,074, or $4.83 each on 1,717,670 shares earned in 1935. For 1936 provision was made, before net earnings, for $80,898 tax on undistributed earnings.

From the sale of an investment in Three In One Oil Co. Sterling Products realized a book profit of $853,798 last year which was used partly to write off the previously deferred expense and for settling existing claims. The remainder, $572,808, was carried to surplus, which was increased by a total of $2,208,537 to $7,833,777 as of December 31.

Walgreen Offers Stock

The Walgreen Co., Chicago, has filed with the Securities and Exchange Commission a registration statement covering 100,000 shares of $100 par value 4½ per cent. cumulative preferred stock with common stock purchase warrants attached and 100,000 shares of no-par-value common stock to be received for issuance upon exercise of the warrants. The proceeds from this stock are to be used for retirement of $4,083,700 of 6½ per cent. preferred stock, for addition of about forty stores to the chain and for other purposes.

Bristol-Myers Earnings Increase

Consolidated profit and loss statement of Bristol-Myers Co. and subsidiaries for the year 1936, shows net earnings, after all charges including provision of $55,133 for undistributed profits surtaxes, of $2,275,251, equivalent to $3.31 per share on 687,168 shares outstanding. This compares with 1935 net income of $2,232,572, or $3.25 per share on 686,999 shares then outstanding.

Sharp & Dohme Improves Earnings

Sharpe & Dohme, Inc., Philadelphia, has reported for the year ended December 31, 1936 a net profit of $1,123,959. This compares with a net profit of $747,846 earned in 1935.

I. V. C. Earns More

International Vitamin Corp. reports for the six months ended December 31, 1936, a net profit of $84,426, equal to 42 cents each on 203,000 shares of $1-par capital stock, as compared with $75,639, or 38 cents each on 200,000 shares, earned in the last half of 1935.

At a meeting of the board of directors of the Dow Chemical Co., Midland, Mich., held February 23, it was decided to call for redemption on March 31, 1937, all of the Series E 2½% Serial Notes dated January 1, 1935, in the principal amount of $720,000.

Dow Chemical Dividend

The Dow Chemical Co., Midland, Mich., paid a dividend of 60 cents on its non-par stock February 15 to stockholders of record February 1, 1937.

Monsanto Chemical Gains

The pamphlet report of the Monsanto Chemical Company and subsidiaries for 1936 shows net profits of $4,605,593, equal after allowance for dividends on the British subsidiary's preference shares and minority interest, to $4,468,703, or $4.01 a share on 1,114,409 common shares, compared with $3,843,390, or $3.84 a share, on 999,123 common shares in 1935.

Edgar M. Queeny, president, reports sales last year of $28,848,438, a gain of 16.8 per cent. over 1935, despite a reduction in the price index of the company's products.

Current assets were $16,144,675 at the year end, including $4,891,067 cash, compared with $11,617,522 and $3,685,083, respectively, a year before, while current liabilities were $3,743,137, against $2,612,992.

Obituaries

Joseph J. Field

Joseph J. Field, drug buyer for the Liggett Drug Co. for thirty-five years, died suddenly February 10 at his home in Forest Hills, N. Y. of a heart attack. He was sixty years old. Mr. Field was connected with Hall & Lyon of Providence when that firm was taken over by the Liggett Co.

Nancy Van Ostrom

It is not often that we write the obituary of a dog but Nancy was definitely different. Nancy, when we first met her, was part of Van's family. During all of her eighteen years she was part of the family and a more delightful, intelligent and affectionate old lady we never met. If you see Van, sometimes formally known as Van Ostrom of Vorac nail polish fame, with a woebegone look, you will know that it is caused by the parting of a man and a dog.

Books - OF IMPORTANCE TO DRUG AND COSMETIC MANUFACTURERS

COSMETICS and PERFUMES

Modern Cosmetics—Chilson, 396 pp.	$ 6.00
Perfumes and Cosmetics—Askinson, 392 pp.	6.00
Moderne Parfumerie—Mann (German), 516 pp.	12.00
Leitfaden Der Modernen Parfumerie—Burger (German) 208 pp.	3.50
Preparation of Perfumes and Cosmetics—Durvelle, 419 pp.	10.00
Perfumes, Cosmetics & Soaps—Poucher Vol. I 439 pp.	8.00
Vol. II 426 pp.	8.00
Vol. III	7.00
Lexikon der Kosmetischen Praxis—Springer (German) 705 pp.	32.00
Modern Parfumerie—Mann-Winter(German)522pp	12.00
Handbuch Der Gesamten Parfumerie Und Kosmetik—Winter (German) 997 pp.	26.00
Cyclopedia of Perfumery—Parry (2 vols.) 844 pp	10.00
Chemistry of Essential Oils and Artificial Perfumes—Parry, Vol. I 549 pp.	12.00
Vol. II 365 pp.	10.00

FORMULARIES

Manufacturers' Practical Recipes—Jameson, 579 pp	$10.00
Henley's Twentieth Century Book of Formulas and Processes—809 pp.	4.00
Chemical Formulary—Bennett, Vols. I, II, III each.	6.00
Pharmaceutical Formulas Vol. I—1146 pp.	8.00
Vol. II—983 pp.	8.00
Practical Flavoring Extract Maker—Kessler, 126 pp	4.00
The Medical Formulary & Prescription Manual—Dauer.	3.50
National Formulary VI—556 pp.	5.00
Prescription Writing and Formulary—Solomon.	4.15
Scientific American Cyclopedia of Formulas—Hopkins, 1077 pp.	5.50
Pharmaceutical Recipe Book—454 pp.	5.00
Flavouring Materials Natural and Synthetic—Clarke, 166 pp.	3.00
Flavours & Essences, a Handbook of Formulae—Gazan, 115 pp.	10.00

CHEMICAL

The Biochemistry of The Lipids—Bull, 127 pp.	$3.25
The Theory of Emulsions and Their Technical Treatment—Clayton, 458 pp.	8.00
Handbook of Chemistry and Physics 20th Ed.	6.00
Commercial Organic Analysis—Allen, 10 vols. each vol. sold sep. per vol.	7.50
Inorganic and Theoretical Chemistry—Taylor,832 pp	6.00
A Short Organic Chemistry—Taylor, 375 pp.	3.00
Technical Aspects of Emulsions—150 pp.	2.50
Chemical Dictionary—Hackh, 790 pp.	10.00
Vegetable Fats & Oils—Jamieson, 444 pp.	6.50

MERCHANDISING

Dollar Makers—Eager, 197 pp.	$ 2.00
Retail Selling and The New Order—Collins,203 pp	2.50
The Road to Good Advertising—Collins, 217 pp.	2.50
How to Run Better Sales Contests—Kaufman, 222 pp	3.50
What Makes People Buy—Laird, 237 pp.	2.50
Rex Cole on Salesmanship—Rex Cole, 253 pp.	2.50
Wholesale Accounting and Control—Heckert & Stone, 234 pp.	3.00
The Law of Drugs and Druggists—Arthur, 487 pp	3.00

BEAUTY CULTURE

Our Vanishing Hair—Nessler, 140 pp.	$ 2.00
The Successful Hairdresser—Wilson, 416 pp.	3.50
Modern Beauty Culture—Verni, 434 pp.	10.00
The Beauty Culture Handbook—Hanckel, 177 pp.	1.50
Modern Beauty Culture—Smith & Rockwood, 290 pp.	3.00

MEDICAL

The Kidney in Health and Disease—754 pp.	$10.00
Tuberculosis—Holmes, 312 pp.	2.00
Nervous and Mental Diseases—Maloy, 551 pp.	7.50
Diseases of Women—Crossen & Crossen, 8th Ed. 999 pp.	10.00
Internal Medicine—Musser, 1288 pp.	10.00
Forensic Medicine—Kerr, 311 pp.	3.60
Pocket Pronouncing Medical Dictionary—Gould. Thumb index.	2.00
	2.50
A Treatise On Medical Jurisprudence—Oppenheimer, 290 pp.	4.00
Physiology in Modern Medicine—Macleod, 1154 pp.	8.50
Treatise on Permanent Wave Burns—Eberhart.	2.00
Recent Advances in Dermatology—Goldsmith, 522 pp.	5.00
Rational Pharmaceutical Treatment of Common Skin Diseases—Goodman, 345 pp.	5.00
Introduction to Dermatology—Sutton, 566 pp.	5.00

PHARMACEUTICAL

Potter's Therapeutics, Materia Medica and Pharmacy—Scott, 997 pp.	$ 8.50
Modern Drug Encyclopedia and Therapeutic Guide—Gutman, 1393 pp.	7.50
United States Dispensatory—Wood-LaWall,1792pp	15.00
Remington's Practice of Pharmacy—8th Edition, 2162 pp.	10.00
U. S. Pharmacopoeia XI—676 pp.	5.00
Essentials of Pharmacy—Snow 804 pp.	7.50
Handbook of Physiology—Halliburton & McDowall, 971 pp.	5.50
Pharmaceutical Chemistry—Krantz, 282 pp.	3.50
The Arithmetic of Pharmacy—Snow, 125 pp.	2.00
Textbook of Physiology—Zoethout, 694 pp.	4.75
Practical Pharmaceutical Chemistry—Cooper & Appleyard, 136 pp.	1.75
A Manual of Pharmacology—Sollman, 123 pp.	7.50
British Pharmacopoeia—1768 pp.	10.00
French Pharmacopoeia—999 pp.	10.00
German Pharmacopoeia—854 pp.	12.00
Swiss Pharmacopoeia—1244 pp.	15.00

MISCELLANEOUS

The Exporters' Encyclopedia, 1936—1780 pp, net with bulletin service.	$20.00
Psyllium Seed—Montague, 170 pp.	2.00
Pyrethrum Flowers—Gnadinger, 380 pp.	5.00
Trade-Marks for Perfumes, Toilet Preparations and Soaps	25.00

NEW BRITISH BOOKS

Technical Aspects of Emulsions—Freundlich.	$4.00
Distillation—Reilly.	1.25
Inorganic and Theoretical Chemistry—Taylor.	6.00
The Chemists' Year Book—Atack.	6.00

The Drug and Cosmetic Industry

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INDUSTRY'S BOOKS

Any book reviewed in this section can be purchased direct from THE DRUG AND COSMETIC INDUSTRY at regular publisher's price.

Inorganic Chemistry, by G. T. Morgan and F. H. Burstall, 462 pages, Chemical Publishing Co., New York. Price $6.00.

This book is subtitled "A Survey of Modern Developments" and it well fills its intended purpose. Less than the first half of the work is devoted to a study of the elements in their periodic groupings, including a chapter on the isotopes of hydrogen and heavy water. The latter part considers special subjects such as the transmutation of elements, coordination compounds, corrosion of metals, etc. Although literature references have been omitted to keep down the bulk of the volume the whole represents a valuable text-book for advanced students in the field.

Epitome of the Pharmacopeia and National Formulary, 240 pages, The American Medical Association, Chicago.

The Epitome has been prepared under the direction of a committee appointed by the Council on Pharmacy and Chemistry of the American Medical Association. The aim has been to include all the matter in the Pharmacopeia and National Formulary which is likely to be of interest to physicians. This consists of the official titles and their abbreviations, synonyms, brief definitions, concise descriptions of the physical properties, actions and uses, and doses. The drugs are arranged alphabetically by titles.

Since the scope of the National Formulary is such as to include many drugs and preparations which are said to be worthless, the committee has added brief comments to aid a discriminating selection of the therapeutic agents.

Colloid Symposium Monograph, edited by H. B. Weiser, 156 pages, The Williams & Wilkins Company, Baltimore, $3.00.

This is a collection of sixteen papers presented at the twelfth symposium on colloid chemistry at Ithaca, New York, June 1935. The papers are highly technical discussions of subjects primarily of scientific interest. They are essential, however, to colloid chemists engaged in research requiring that they keep abreast of the latest investigations in their field.

Physiological Chemistry, by J. F. McClendon and C. J. V. Pettibone, 454 pages, C. V. Mosby Company, St. Louis, $3.50.

In this sixth edition can be found many changes from previous editions, changes having been made directly to benefit the student. The size of the edition has been increased somewhat to cover each phase of the subject effectively and to bring in the latest information on the subject. Three new chapters have been added.

The material is presented in smooth, logical arrangement. The chemical elements are first covered, then the tissues they affect, and then their digestion and absorption. These chapters are tied together by several others on Speed of Action, Enzymes, Energy Exchange, Metabolism, etc. The latter part of the book is a laboratory manual.

Modern Chemistry, by Charles E. Dull, Henry Holt and Co., New York, 745 pp. illustrated. Price $1.80.

This work was written to give the young student and the general reader a knowledge of chemistry as a whole. While it will appeal to the layman this book contains all the material needed to meet the syllabi of the College Entrance Board, of the New York State Board of Regents.

The Cosmetic Formulary, by H. Bennett, The Chemical Publishing Co., New York, 279 pages, price $3.75.

In accordance with the maxim which says that the right hand should not know what the left hand does, the ambidextrous Mr. Bennett debunks cosmetics in "More for your Money" and now compiles, from unacknowledged sources, a "Cosmetic Formulary." A compilation is often valuable, but only when it represents a good editorial job in selection and elimination; this is not the case in the present volume. As in volumes of the "Chemical Formulary" by the same author, far too much use has been made of trademarked preparations of unknown composition in the formulas, so that many of the latter are of distinctly limited use.

Toxicology or The Effects of Poisons, by Underhill and Koppanyi, Third Edition, P. Blakiston's Son & Co., Inc., Phila., 325 pp. price $2.50.

This book has been revised and rewritten in its third edition by Theodore Koppanyi after the death of its original author. The form, and also the original text, has been retained as far as possible in the new form with the addition of knowledge available since the second edition appeared some eight years ago.

Among the substances of toxicological importance not included in the previous editions are avertin, camphor substitutes, cinchophen, cyclopropane, dinitrophenol, ephedrine, mercurial diuretics, newer barbituric acid derivatives, quinine and its substitutes, triorthocresyl phosphate and thyroid, which have been described in the present revision. Some chapters, e. g., the sections on carbon tetrachloride, thymol, thallium, and on food poisoning have been rewritten. Most sections on the treatment of poisoning have been revised to bring them in keeping with the latest developments in therapeutics.

The Intimate Side of a Woman's Life, by Leona W. Chalmers, Pioneer Publications, Inc., New York, 128 pp. $1.50.

Up to the present time practically all literature on this subject has been written by physicians from the purely medical standpoint. Here is a frank discussion of the subject by a lay woman with its principal purpose the presentation of the facts underlying personal hygiene and the best tried methods of accomplishing attractiveness through bodily cleanliness. While it covers the subject most thoroughly its greatest asset is the directness and simplicity with which the subject has been handled. It can be frankly recommended to all women.

Eugenical Sterilization, by The Committee of the American Neurological Association for the Investigation of Eugenical Sterilization, The MacMillan Co., New York, 211 p. price $3.00.

In this reorientation of the problem the committee, composed of Doctors A. Myerson, J. B. Ayer, T. J. Putnam, C. E. Keeler and L. Alexander, has studied the principal literature of the world on the subject assigned to it by the American Neurological Association.

Apparently most of the legislation which has been enacted so far is based more upon a desire to elevate the human race than upon proven facts. For this reason the Committee has made definite recommendations which should be of interest to everyone who wishes to be posted on this most vital procedure and its ultimate worth as a factor in social control.

Heart Disease and Tuberculosis, S. Adolphus Knopf, M. D., The Livingston Press, 108 pp. Price $1.25.

This is a brief up-to-date recapitulation of the most important matters which have been published for many years devoted to the combat of heart disease and tuberculosis in their medical, surgical and medico-social aspects. This book has been issued by the patients at The Potts Memorial Hospital for the rehabilitation of the tuberculous.

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CIVET ARTIFICIAL F. B.—There have been offered, from time to time, numerous substitutes for natural civet. Careful examination and application of many of these have failed to reveal a synthetic capable of imparting the characteristic softness of odor for which the genuine product is noted. This has lead us to the development of CIVET ARTIFICIAL F. B.—a *successful* endeavor to overcome this common deficiency. Imparting the odor character typical of natural civet, our Artificial resembles it closely in color and consistency, is much stronger and possesses a decided advantage in its solubility. In the form of alcoholic tinctures, properly aged, it can be handled in fine perfume formulae in the same manner as Civet Absolute. Exacting perfumers will not be long in recognizing this new material for its true worth.

CASTOREUM ARTIFICIAL F. B.—The great difference between this synthetic material and the natural castoreum obtained from beavers is one of cost. In actual appearance, odor and strength, it varies little from the genuine. For most practical purposes, CASTOREUM ARTIFICIAL F. B. should be used in the form of a tincture made in proportions of 2 ounces of the Artificial to 1 gallon of alcohol. In some formulae it can be used to replace the genuine castoreum completely; in others, most satisfactory results are obtained by combining it with the natural product. Its characteristic odor and fixation qualities render it especially adaptable to heavy perfume compounds of the Oriental type. Extremely low priced and effective, CASTOREUM ARTIFICIAL F. B. has much to recommend it to the producer of fine perfumes.

AMBERGRIS ARTIFICIAL F. B.—This is a new and fully perfected synthetic ambergris. In matters of cost and convenience it offers distinct advantages over the genuine product. It is readily soluble in both alcohol and essential oils. Alcoholic tinctures made with AMBERGRIS ARTIFICIAL F. B. impart tenacity, fixation and stability to a high degree. Manufacturers who compound their own blends will find that it enables them to produce exquisite modern effects, perfumes embodying the so-called ambre note and floral types such as lilac, at reduced cost and without noticeable effect upon quality. Perfumers using genuine ambergris or other natural or artificial fixatives are invited to sample any of the four synthetics described in this group and compare results carefully with the odor-effects they are now attaining.

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PACKAGE MACHINERY COMPANY
Over a Quarter Billion Packages per day are wrapped on our Machines

PRODUCTION FORUM

BY Francis Chilson
PRODUCTION ENGINEER

PRESSURE EXTRACTION

The problem of drug extraction continues to intrigue us. No other problem in the drug industry is more interesting and few are more baffling. If drugs were extracted in very large lots in every plant, the problem would already have its answer in several modern extraction methods. But since so many drugs are extracted in relatively small lots and in such variety, it becomes a challenging problem to develop a method that will match the flexibility provided by percolators and the minor investment represented by them. A number of modern extraction plants have increased the usual yield of some drugs; they have brought alcohol lossess and labor cost to the irreducible minimum. But the snag lies in the fact that such equipment is too inflexible and too costly to install in plants where a variety of drugs in small lots must be extracted, besides being too difficult to clean. Another difficulty is inherent in the problem, namely, that even the modern plants will handle only in a very few instances a finely ground drug.

We know that yields are affected by the particle size of the drug. The smaller the particle, the higher the yield. This has been so definitely established by scientific experiment that it cannot be challenged. A number of workers in the field still refuse to believe this statement because they got lower yields with fine drug than they did with coarse drug. In every case, however, the apparatus and not the grind is at fault. When fine drug is put into a percolator and macerated, it will drain very little or not at all. The same thing is true of the majority of large scale extraction plants.

To be generally applicable to all drugs and to all conditions an ideal extraction plant must match in flexibility the situation provided by percolators. This means that it should be possible to make a complete extraction and a thorough clean-up of the apparatus within twenty-four hours. It is obvious that if, in a given plant, 200 different drugs are extracted during the course of a year, any plant that will match the flexibility of percolators cannot require more than a day to extract a charge.

Such a plant must also be capable of handling finer drug than can be handled by any known method, for in extracting finely ground drug lies the best opportunity to increase yields.

Since, the finer the drug, the greater amount of menstruum will it hold, it becomes obvious that the percolate must be forcibly separated from the marc. Three methods of applying force have been tried or are being investigated.

Liquid pressure has been tried successfully, notably in the extraction of pyrethrum. In such a system the menstruum is forced under pressures up to a hundred pounds into the extraction vessel to displace the percolate already in it. By pulling a vacuum on top of the charge and introducing the fresh menstruum at the bottom the operation is facilitated.

We tried a variation of this in the following manner: Drug ground from sixty to one hundred mesh was mixed rapidly for two hours with enough menstruum to make a thick sludge of it. A quantity of filter aid was added and through the use of a sludge pump the mass was pumped into a filter press. When the filtrate ceased coming off, the cake was washed with fresh menstruum without removing it from the filter press. Finally the alcohol in the cake was recovered by washing with fresh water.

The results were not good, not from any fault in theory, but because of restrictions in the apparatus. In the first place, due to the design of the particular press employed, the cakes did not build up uniformly on the leaves. The consequence was that the menstruum broke through the cakes at their weakest points, leaving large areas of cake that did not get washed at all. Whether or not it ever will be possible to obtain or to design a filter press in which a cake will build up with uniform thickness all over the leaves remains to be seen.

Centrifugal force has been tried by the writer and others. Here the high cost of the apparatus as a separating medium rules it out in the first place. In the second place when drugs are finely ground, and especially, when they are slightly sticky, the efficiency of the centrifugal is impaired to a degree which rules it out as a practical device.

Mechanical force as exemplified in hydraulic and screw presses has been tried with excellent results in some instances. Hydraulic presses are ruled out for two excellent reasons: it isn't possible to transfer the marc to or from them without exposure and consequent alcohol loss; secondly, they are too expensive and too slow.

The screw press, as exemplified by the Anderson expeller, has done yeoman service in the extraction of pyrethrum and of oil bearing seeds. At one time we thought this was the answer to our prayer. We tried one of them experimentally on several drugs. Owing to the fact that screw presses are designed to exert fifteen to twenty tons pressure, they have to be so ruggedly built, that to take them apart for cleaning is a major operation, require time and husky helpers. Another difficulty lay

At the Packaging Show

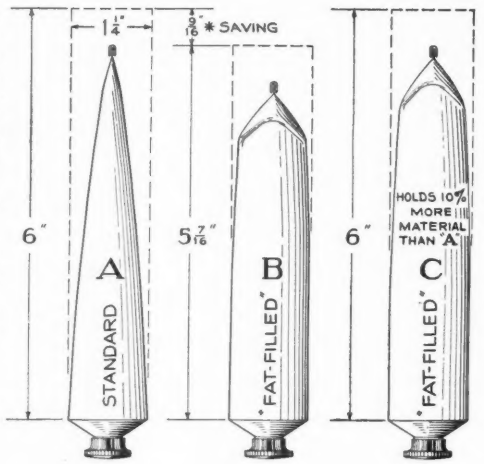
[Booth 412]

Let us Show You How:

To Save on Your Tube Metal –
To Put More Material in Your Tubes –

Tubes A and B each hold the same amount of material. Tube A, before being closed and sealed in the usual manner, was 6 in long. Tube B, before being "fat-filled" by the Stokes patented method, was 3/16" shorter. For a tube 1¼ in. in diameter, the saving in tube metal is up to *$200.00 per 1000 gross (with tin at 50¢ a lb), depending upon the degree of "fat fill" Tube C, "fat-filled," holds approximately 10% more material than tube A, but is the same length (6 in.).

PAT NO { 2,053,015 / 2,068,615



Sketch shows how "fat-filling" saves tube metal and enhances sales appeal of package. Filling is accurate, clean and fast as well as economical and is accomplished by means of specially designed attachments and cups which can be arranged for different degrees of "fat-filling" as required.

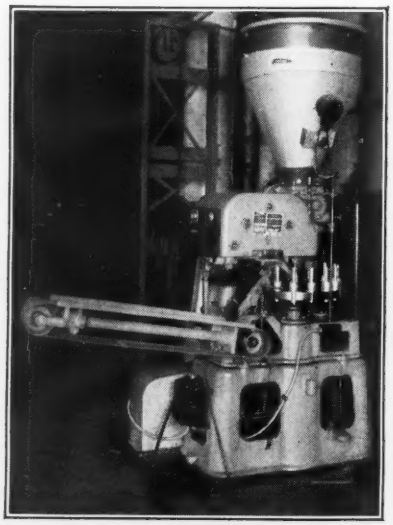
The sketch shows how you can put the *same* amount of material in a *shorter* tube, thus saving tube metal, or *more* material in your *present* tube thus adding to the sales appeal of your package. This is done by means of the Stokes patented method of "fat-filling."

Another Stokes development to save on production costs and increase the sales appeal of your tubes is the Westite Hermetic Closure. This leakproof method of sealing tubes eliminates all seepage and corrosion difficulties and at the same time does away with all clip expense and requires less tube metal.

Let us explain at the Show or by letter.

At left—Enhancing sales appeal of collapsible tubes, at Carters Ink Company. Tubes are "fat-filled" on Stokes 90-D Tube-filling, Closing and Sealing Machines.

At right—Eliminating seepage in tubes filled with a special ointment, at Abbott Laboratories. Tubes are hermetically sealed with Westite Hermetic closure on Stokes 90-DH Tube-filling, Closing and Sealing Machines.



FJS F. J. STOKES MACHINE COMPANY
PHARMACEUTICAL EQUIPMENT
ESTABLISHED 1895

5932 Tabor Road **Olney P. O.** **Philadelphia, Pa.**

in the fact that standard units are not enclosed so that they can handle low boiling solvents, consequently the heat generated by the terrific pressure vaporizes the solvent and as no means is provided for catching it, it is lost. Finally the very heat generated by the excessive pressure would ruin alkaloidal drugs and others, like senna, the physiological activity of which is impaired by excessive heat.

It became apparent to us at once that such excessive pressure is not necessary. *Pressure must be looked upon as only a means of securing flexibility by eliminating the prolonged time that ordinarily would be required for draining the drug.* Therefore, it need not be very great—probably not more than one hundred pounds per square inch—to remove more of the percolate than will drain out by gravity from a percolator or any other extraction apparatus. You all know that after drug has been drained of the last drop, you can take a handful of the marc and squeeze still more out of it.

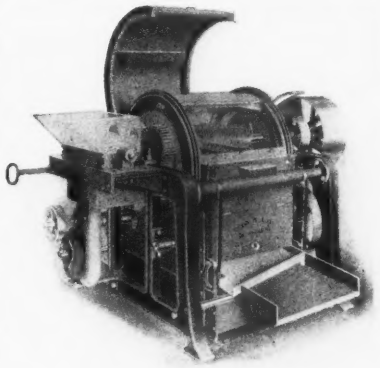
Suppose for a moment that we have a vacuum tight press that is easy to clean and which will exert only enough pressure to squeeze the drug without heating it; suppose further that this press has a capacity of 1000 pounds per hour (which is a low figure for a continuous press), isn't it reasonable to believe that a complete extraction could be made within a day? We already know that by means of vacuum or through fine grinding we can get quick penetration of the drug. We already know that by mixing we can hasten the solution and diffusion of the active constituents. Therefore, all that is needed is a quick means of separating the percolate from the marc so that the various washes can be handled rapidly.

We have become convinced of the futility of attempting to secure complete extraction by means of one pass through a press. This can be done in a few cases as for instance in the extraction of senna or cascara where the percentage of soluble solids is very high and where it may even be undesirable to attempt to get all of the soluble constituents out of the drug. But in the case of alkaloidal drugs which may contain only a fraction of a per cent. of active constituents, we are firmly convinced that two or more washes are necessary.

If we can find or design a suitable type of press, we believe we shall be able to hurdle two of the obstacles that stand in the way of an extraction process that can generally be used by the trade. Through the use of such a press we shall be able to secure quick draining or separation and we should be able to reduce the total amount of menstruum required to exhaust a given charge.

OMISSION

We'd like to call your attention to a serious omission that occurred in our paper on grinding last month. You will recall that a description was given of a snuff granulator, containing rotary cutters within a revolving screen. No photograph of the machine was published. The make-up department of the magazine, it seems, lost the picture we were at such pains to procure for them, so they hit upon the



ingenious idea of substituting a photograph of a roller mill. The fact that a roller mill cannot by any stretch of the imagination be used for grinding crude drugs, didn't trouble the art department any. They can always be depended upon to turn up an illustration when one is wanted. So if someday we write a piece on mixing ointment and it is illustrated with a snuff cutter, we trust you won't mind. We think, however, that in the future we will stick to nudes. They bear repetition well and always bring up the points that should be developed. Besides they illustrate everything.

PNEUMATIC BLOWER

If you are interested in cleaning bottles with air you should ask Pneumatic Scale Corp., Norfolk Downs, Mass., to send you the data on their new, automatic blower, which has had its tryout in the distillerly industry. This machine is different from all the blowers you've seen. The bottles actually are turned upside down before blowing. This feature was designed to overcome the objection that many people had to air cleaners generally, namely, that very large pieces of glass could not be removed, either because the blowing stems in the necks of the bottles restricted the area to such an extent, that even if the broken glass were carried up into the necks, it could not get out, and also the other objection that, even if the broken glass were carried up through the bottle necks, it would fall back again into the bottles as soon as the air blast ceased, owing to the fact that dust collector openings are too small.

Here's how the machine operates. The bottles are fed to it right side up. They run into what might be called a reversing drum. This turns the bottles upside down. When the bottles are in the upside down position, the mechanism hesitates a moment before the blowing mandrels go up into the necks of the bottles past the shoulders. This gives large particles a chance to fall out before the bottle neck area is restricted by the insertion of the mandrels. An adequate blast of air loosens up the dust and dirt and carries it out into a dust trap. Then the blowing mandrels withdraw, and as they clear the bottle necks, there is another momentary hesitation to allow any very large particles of glass, which might have been stuck inside the bottles before blowing, to fall out. Then the drum reverses, carrying the bottles back to their original position on the conveyor whence they are permitted to discharge. The reversing drum is made with two bottle tracks, so that while one group of bottles is in the upside down position, the second track is in the upright position and is receiving its load of bottles. The machine is very simple, highly adjustable, competitive in price and as fast as the fastest filling machinery.

CONTINUOUS PRESS

In the subjoined note on drug extraction and in previous articles on the subject, we have indicated the need for a vapor proof, high capacity, continuous press which can easily and quickly be cleaned. An exhaustive search of the market failed to reveal that any such press is commercially

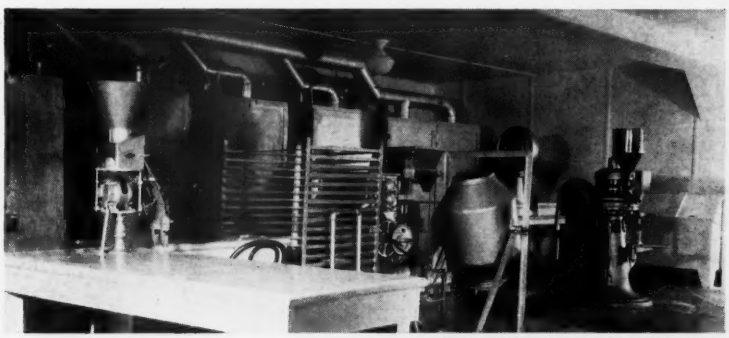
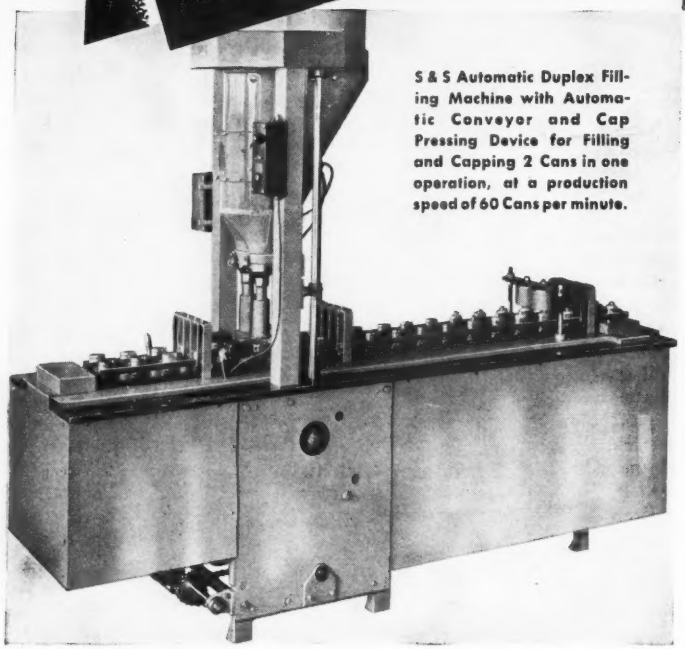


PHOTO COURTESY F. J. STOKES MACHINE CO.

EFFERVESCENT TABLET MANUFACTURING INSTALLATION

Another Leading Company Chooses... S&S FILLING EQUIPMENT



S & S Automatic Duplex Filling Machine with Automatic Conveyor and Cap Pressing Device for Filling and Capping 2 Cans in one operation, at a production speed of 60 Cans per minute.

FILLING MACHINES for powders, granular products, pastes . . . CARTON Filling and sealing machines . . . ENVELOPE Filling and sealing machines . . . TIGHT-WRAPPING Machines.

★

When E. R. Squibb & Sons, Manufacturing Chemists to the Medical Profession since 1858, decided to package Squibb Tooth Powder they chose the Stokes & Smith Automatic Duplex Filling Machine.

This machine fills two cans of the same size, or cans of two different sizes, at the same time. It also presses the caps in place and the complete operation is performed at a production speed of sixty packages per minute. That such a distinguished firm as E. R. Squibb & Sons should choose S & S Filling Equipment is considered high tribute. Perhaps it may bear witness to the fact that there is an S & S Filling Machine suited to your requirements, whether your product be a granular, powder or paste.

SPEEDS TO SUIT YOUR NEEDS—15-30-60-120 PER MINUTE—WRITE FOR ILLUSTRATED FOLDER

STOKES & SMITH Co

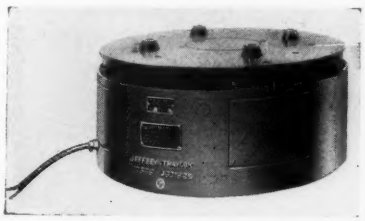
PACKAGING MACHINERY — PAPER BOX MACHINERY

4912 Summerdale Ave., Philadelphia, U. S. A.

available. Since the above short article was written two months ago, we had the great good fortune to hit upon a simple idea that fills the bill exactly and proved itself by the fact that a crude model worked when tried out on drug marc. Our patent attorneys have stated that they will be much surprised if we fail to get a basic patent on it. Without waiting for the patent to be issued we have already made arrangements with a machinery firm well known to you to take over the construction and sale of the machine. In a short time, possibly in two months, the first commercial machine will have been built and we hope at that time to have an illustration for publication. When you see it, you will be just as amazed at its simplicity and manifest efficiency as we were when the idea first bounced on our skull. The mechanical principle of the press is so simple and so obvious that we are amazed that it has not been applied before. It would be just our luck to have some one beat us to the patents by a couple of weeks. It has happened before, so in the meantime we are keeping our fingers crossed and our mouth shut about the design of the press until everything is in the clear.

BARREL PACKER

A new electric vibrating barrel packer of low head and high capacity (up to 800 lbs. gross) is announced by the Jeffrey-Traylor Division of the Jeffrey Manufacturing Co., Columbus, Ohio. Standing only 16½ in. high, it requires a shallower pit than other similar units for floor-level operation. As it can be installed water tight by use of a rubber skirt connecting



the periphery of the head with the edge of the pit, the packer may be washed down with a hose without fear of wetting the electrical parts.

The main frame is cylindrical and into it are built four powerful stators which drive vertically. Conforming to the main frame, the head is circular, of 30 in. diameter, and provided with either a ring or lugs to fit any container up to its maximum diameter. As the vibrator bars in the stator assembly are tuned for maximum load, the machine will handle any load up to capacity with equal facility. The stators are energized by pulsating direct current, allowing adjustment of the intensity of vibrations to give maximum speed and density of packing for any given material.

ENAMELED STORAGE PAIL

The National Steel Barrel Company, 3850 East 91st Street, Cleveland, Ohio, has just introduced a line of five-gallon pails equipped with the company's easy-to-open, tight-sealing, Quik-Lox Rings which are useful for storing materials and which offer many advantages to shippers of solid, semi-solid and liquid materials and to their customers. The new pails are easy to fill as the ring permits the head to

be removed, exposing the entire interior of the pail to the view of the operator, eliminating exact spotting for filling and reducing the likelihood of spillage to a minimum.

After filling, the gasket-lined heads are replaced and the pails prepared for shipment by simply closing the quick acting, leverlike ring, thereby lowering the cost of this operation and speeding it up. Provision is made for wire sealing to insure tamper-proof delivery in the event this is desirable. Also, the fully removable heads may be fitted with pull spouts, etc., as needed.

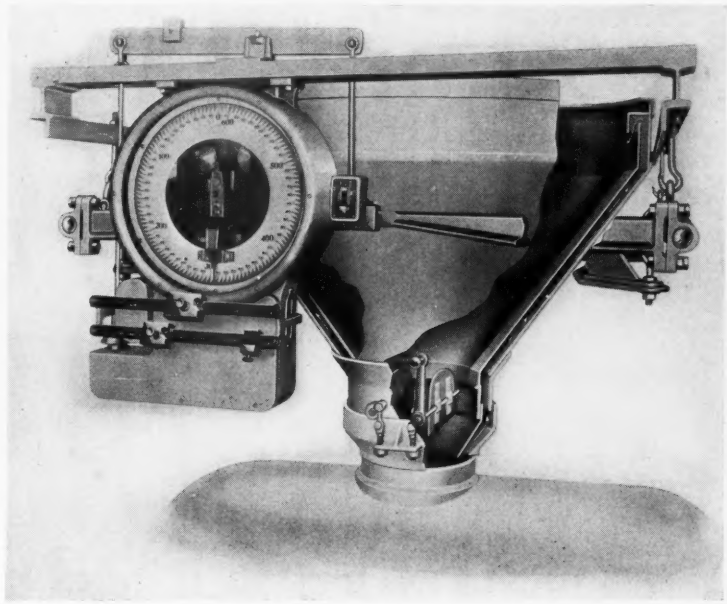
The customer, on receiving the shipment, is required only to release the ring and lift off the head. It is very easy. No tools are needed. No wedging action—resulting frequently in skinned knuckles—is required.

DUSTLESS WEIGHING HOPPER

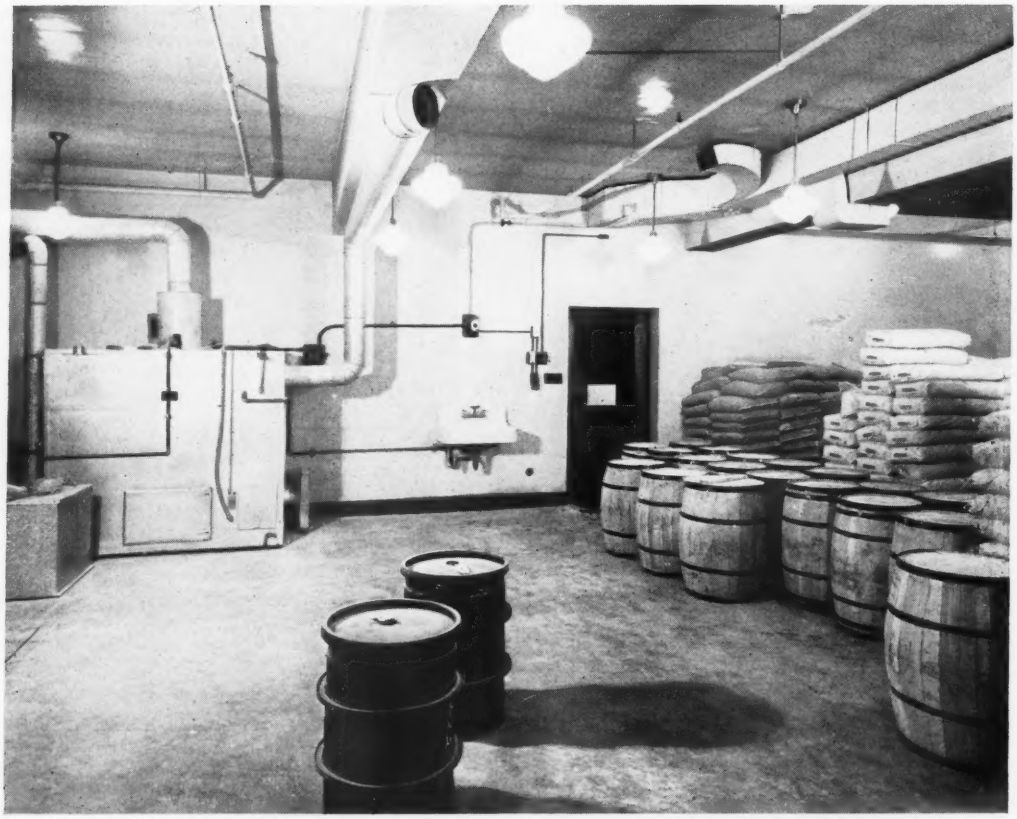
We have just received a letter from the Read Machinery Co. Inc., York, Pa. regarding their new dustless weighing hopper. The use of this hopper with or without the weighing device, in handling drug and cosmetic powders is obvious. Read's letter following says:

"The attached photograph shows this device in cross section; and as you will notice, comprises a set of butterfly discharge gates for controlling the discharge of the contents of the hopper—these gates operating coincidental with the sliding sleeve, which raises and lowers vertically by means of toggle connections to the shaft controlling the butterfly discharge gates.

"The sliding sleeve consists of two annular rings, through the inside one of which the contents of the hopper are discharged; and the space between these two annular rings permits the displaced air in the tank or other vessel which is being filled, to be returned with the dust directly into two flues on the interior of the hopper. In actual practice, it has been found that the combined pressure exerted by reason of the displaced air in the filled vessel, plus a partial vacuum created in the hopper itself by reason of the discharge of its contents, automatically returns all dust to the interior of the hopper."



FOR WINTER DRYNESS ON HUMID SUMMER DAYS



This Lectrodryer Maintains a Constant Lowered Relative Humidity in a Chemical Storage Room

LECTRODRYER

"ACTIVATED ALUMINA SYSTEM"
REG. U. S. PAT. OFF.

YOU CANNOT MAKE EFFERVESCENTS WITHOUT DEHUMIDIFIED AIR

With a LECTRODRYER you can maintain your effervescent room at the required low relative humidity so that the salts can be packed at any time—orders can be filled on schedule—no delays by high humidity.

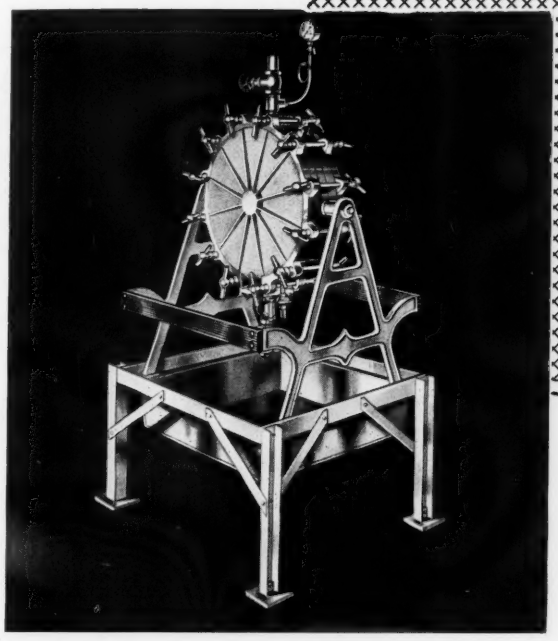
The LECTRODRYER provides an inexpensive and positive way to control the humidity.

Many nationally known manufacturers now use LECTRO-DRYER equipment.

PITTSBURGH LECTRODRYER CORPORATION

FOOT 32nd STREET, PITTSBURGH, PA.

U.S. MULTIPLE DRUM DISC FILTERS

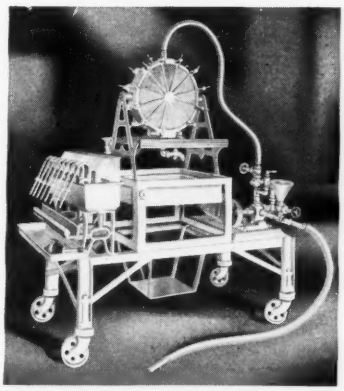


Presents a large filtering area. Is compact, efficient. Universally recognized for its efficiency and the unsurpassed brilliancy imparted to liquids filtered by it.
Furnished in two sizes —12 and 18 inch discs.

are used in many outstanding plants in the Drug and Cosmetic line, such as

Colgate, Palmolive, Peet Co.
The Norwich Pharmacal Co.
Hoshi Pharmaceutical Co., Tokio, Japan
Andrew Jergens, Cincinnati
Hamlin Wizard Oil Co.
Walgreen Drug Co., Chicago
Kolynos Company
Kissproof Company, Inc.

and in hundreds of other plants in all lines of industry where a fine filtration of liquid products is required.



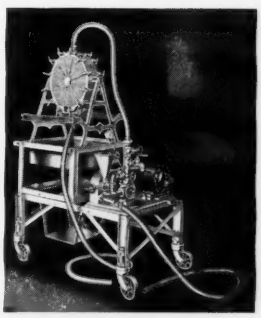
Combination Outfit No. 4 U. S. Drum Disc Filter, Bronze Rotary Pump and 8 tube Siphon Filler mounted on a portable frame.

Portable Combination Outfits

For Filtering, Filling and Pumping Operations

The U. S. Multiple Drum Disc Filter can be had in a portable combination outfit for the filtering, pumping and filling into containers. These outfits can be readily moved about the bottling plant and brought up to storage tanks, casks or barrels wherever they may be located, for all of these operations in combination or any of them independently.

Useful where different grades of products are handled in the same plant or where the filtering or filling operations are not of sufficient volume or constant enough to require permanently fixed machines operating in line.



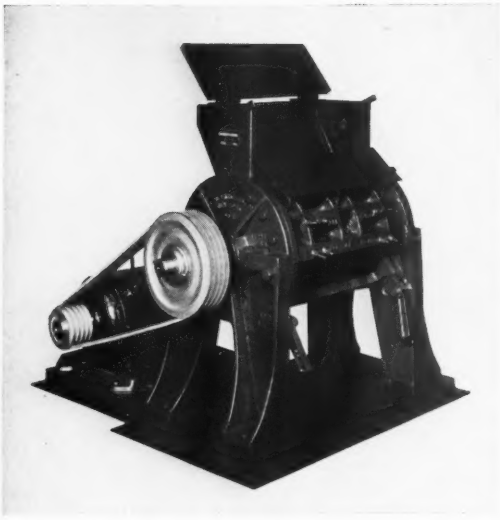
Combination Outfit No. 6 U. S. Drum Disc Filter and Bronze Rotary Pump mounted on a portable frame.

U. S. BOTTLERS MACHINERY CO.

4009-4027 No. Rockwell St. Offices in all principal cities CHICAGO, ILL.

For Real Improvement in Cutting

Drugs • Bark • Roots • Seeds • Fibers • Leaves • Stems • Herbs



Abbé Rotary Cutter available in laboratory and 5 plant scale sizes. Ideal for cutting and grinding such crude drugs as Belladonna, Henbane, Nux Vomica, Vanilla, Mandrake, Licorice, Etc., and other roots, herbs, bark, seeds and charcoal.

INSTALL THE

ABBÉ ROTARY CUTTER

- Knives of highest quality steel, readily adjustable in speed or pitch for highest cutting efficiency.
- Cutter can be quickly opened for changing knives or screen.
- Grinds dry or sticky materials.
- Gives uniformity of ground particles and avoids pulverization to a degree that improves and hastens percolation.
- Rotating screen easily removable and changed, facilitates quick passage of properly sized material.
- Machine may be easily enclosed in dust-tight housing.

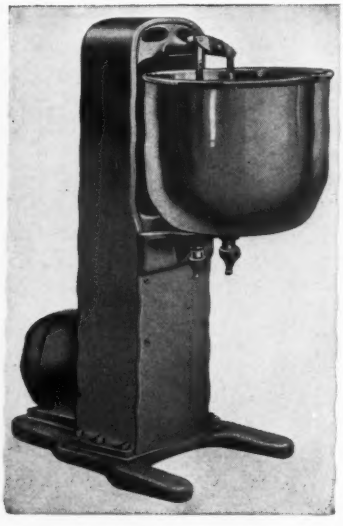
Write for Bulletin RC38

ABBÉ ENGINEERING CO.

56 Church Street — New York, N. Y.

THE ELECTRIC HOMOGENIZER FOR SMALL-SCALE MANUFACTURE

Designed to meet a very definite need in smaller plant production, experimental work, and as auxiliary equipment to large scale production units. It is particularly suited to limited production and for laboratory purposes where extremely high pressures are not required.



Recommended for making all kinds of liquid emulsions and suspensions, and for ointments, creams, lotions, etc.

This homogenizer has an operating capacity of from 12 to 15 gallons per hour. It is sturdily constructed, with long hour heavy duty motor, and meets all requirements of continuous service.

Complete literature, including the booklet "Cosmetic Emulsions and Their Stable Preparation," upon request.

A convenient system of deferred payments available if desired.

INTERNATIONAL EMULSIFIERS, Inc.

666 LAKE SHORE DRIVE, CHICAGO, ILLINOIS

PROFITABLE REBUILT EQUIPMENT

Take advantage of the unusual "hard-to-find" equipment listed below!

1—Stokes No. 2C piston type Tube Filler, motor driven.
1—Stokes No. 2B pressure type Tube Filler, motor driven.
1—U. S. Bottlers Combination No. 4 Unit, consisting of Filter with pump and motor and 6 spout Syphon Bottle Filler.
1—Karl Kiefer Diacell Filter, complete with Packer.
3—Paul O. Abbe No. 3 Eureka Jar Mills.
1—Day 12" Ointment Mill, motor driven.
3—Pfaudler 150 gallon tilting type Glass Lined rouge and powder Mixers, with double motion agitators.
12—Pfaudler and Glascote 20 to 75 gallon Glass Lined Tanks.
1—World Improved, Model S, Labeling Machine.
4—Day 50, 200, and 2000 lbs. Dry Powder Mixers and Sifters, motor driven.
3—Day and Robinson 100 and 600 lb. Dry Powder Mixers and Sifters.
4—Day 800 lb. Dry Powder Mixer, steam jacketed.
1—Day 40 gallon Pony Mixer, motor driven, with enameled cans.
1—Day 4 speed Gem Cream Mixer, motor driven.
1—Karl Kiefer 100 gallon re-circulating Percolator with pump and motor.
1—Rotex Sifter, 20 x 48", motor driven.
3—Colton No. 2B Tablet Machines, up to 1/2" dia.
1—Stokes H Tablet Machine, up to 2" dia.
1—Theo. Walter 3' dia. Copper Vacuum Pan with catch-all and condenser.
2—Stokes, Kiefer & Goldman 72 and 80 spout Bottle Washers, motor driven.
1—Colton No. 14 Automatic Tube Filling and Closing Machine.
1—Stokes No. 90C Automatic Tube Filling and Closing Machine.

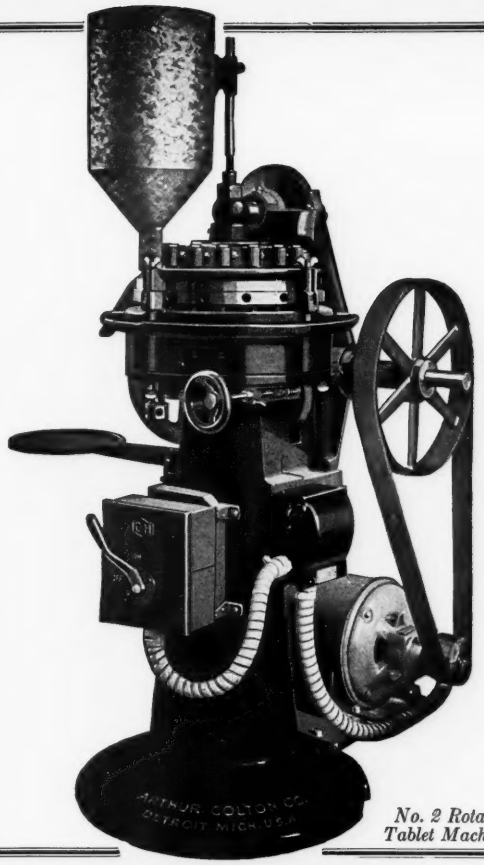
Also a complete stock of Kettles, Mixers, Filters, Pumps, etc., etc.

"We buy from single items to complete plants."

STEIN-BRILL CORP.

Agent for George G. Rodgers Co.

187 Varick Street — *New York, N. Y.*
Cable Address:—Bristen — Tel. WAlker 5-6892-3-4



No. 2 Rotary Tablet Machine

New and Improved!

We have no yearly models—but improvements and refinements are being constantly added to Colton machines.

There are over five hundred Colton Rotaries in use.

Superior design, sturdy construction and ease in operation have made this possible.

The No. 2 Rotary Tablet Machine has such desirable features as *positive pressure*, eliminating varying thicknesses of tablets; *hardened steel gear drive*, eliminating frequent replacement of worms used on other makes, and *sliding upper punch holders*, to hold the punches rigidly, enabling the manufacture of special shaped tablets most satisfactorily.

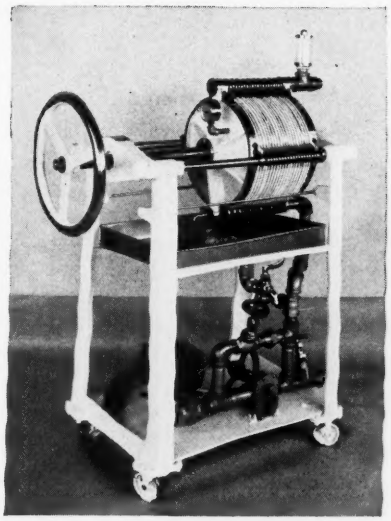
Write for Catalogs.

ARTHUR COLTON COMPANY

2620 East Jefferson Ave.

Detroit, Michigan

•USE AN ERTEL

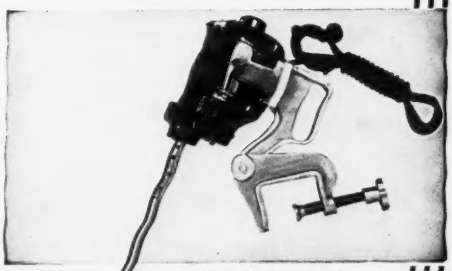


ASBESTOS DISK FILTER ... AND BE SURE

Why take a chance? An Ertel Asbestos Disk Filter assures proper filtration at all times. Germ-proofs your liquids . . . and gives them a brilliance that defies competition.

If your liquids don't have the sparkle they should, they don't have the appeal they should. If germ-proofing is now a matter of questionable success you are taking an *unnecessary risk. Play safe* with an Ertel Filter and be sure.

Ertel Asbestos Disk Filters are scientifically designed by America's most experienced engineers. The performance *record of each model is unequalled.* Send us a sample *of your liquids for proof.*



ERTEL BACK GEARED MIXER

Complete, proper mixing is of special importance in drug and cosmetic manufacture. An Ertel Mixer speeds up mixing, *assures proper mixing*, and offers extra portability. The Ertel Mixer is scientifically balanced and easy to handle.

Manufacturers of

Asbestos Disk Filters, Neutral Asbestos Filter Sheets, Pumps, Portable Mixers, *Glass Lined Tanks*, Allegheny Stainless Steel Tanks, *Jacketed Tanks*, Portable Vacuum Bottle Fillers, Semi-automatic Vacuum Bottle Fillers, Capping Equipment.

ERTEL ENGINEERING CORPORATION

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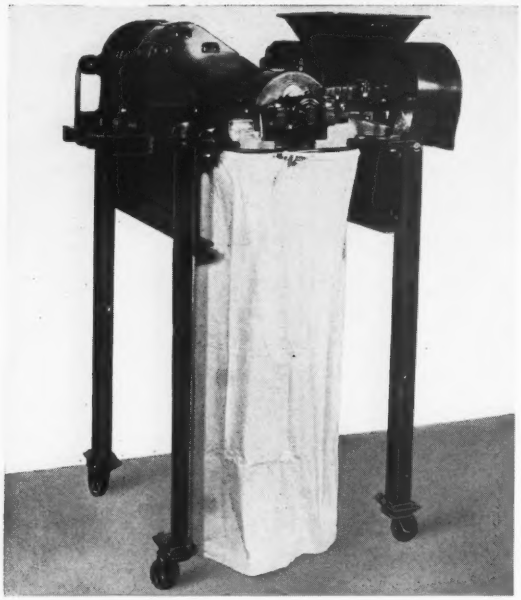

No. 1SH. Mikro-Pulverizer for small production work. Furnished complete with motors and drives and mounted on stand as shown (with or without casters) it is ready for operation—a complete miniature pulverizing plant.

For Better Face Powder and Rouge . . .

for reduced costs . . . and simplicity use the new, dustless

MIKRO-PULVERIZER

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Eliminate Pre-Grinding · Eliminate Sifting

The complete process for making thoroughly dispersed and completely blended cosmetic mixtures consists only of this:

Roughly pre-mix the ingredients and run the mixture through a Mikro-Pulverizer. THAT'S ALL!

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PULVERIZING MACHINERY COMPANY

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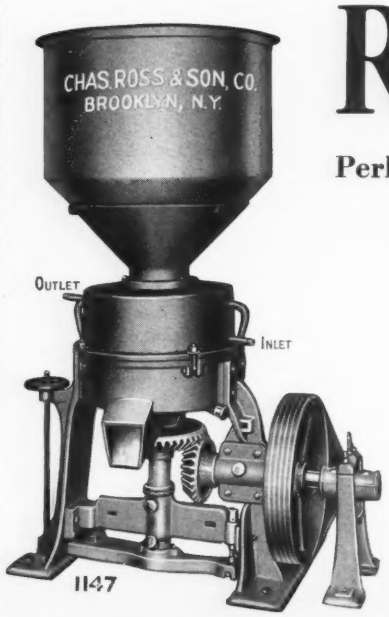

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Perhaps you haven't the right mill for the job!

For milling Ointments—Gall Cures—Tooth Pastes—Compounds—Color Bases—or other pastes and creams you need a ROSS Conical Burr Stone Mill.

Note These Special Features:-

Large Feed Hopper with Worm Feed
Grinding Medium Conical Burr Stone
Materials totally enclosed at all times
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Especially suited for Volatile Materials.

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Manufacturers of Mixing and Grinding Machinery Since 1869

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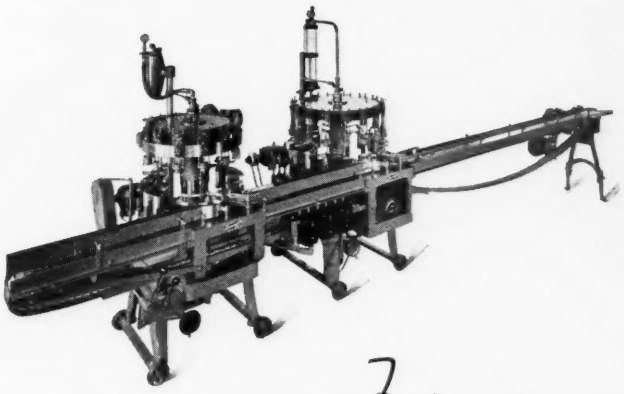

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For lowest-cost production, consult KIEFER.

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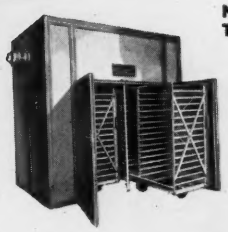
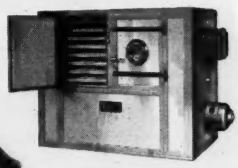
The texture and color of a product are often dependent on scientifically *correct* drying. It is highly important, therefore, to select a dryer that is ideal for the perfect drying of a particular product . . . a dryer by a manufacturer with a reputation to uphold. Proctor Dryers have been proved over a long period of time and in a large number of installations to be correct for the uniform drying of pharmaceuticals and cosmetics, and a wide variety of allied products. In some cases, standard units are satisfactory, in others, it is necessary to design special dryers, but in every case, economical, highly efficient and perfectly uniform drying is assured.

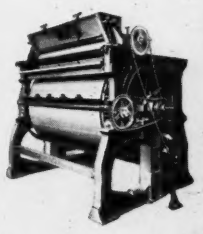


New Proctor Truck Dryer

New Proctor Cabinet Tray Dryer



New Proctor Laboratory Dryer



New Proctor Soap Chilling Roll

PROCTOR & SCHWARTZ, INC.

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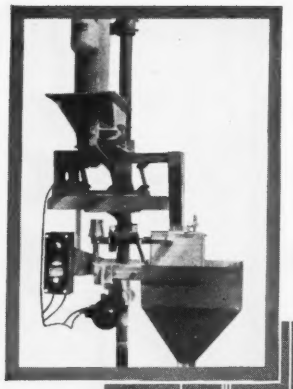
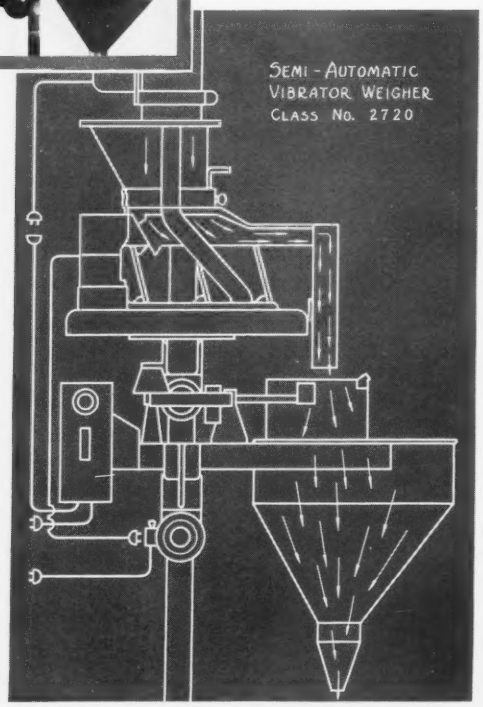


Shake-down

DOES THE TRICK



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This Pneumatic Net Weight Weigher handles smaller productions as accurately as its completely automatic "bigger brother" built for greater speeds. Through the use of the recently developed electric vibrator principle, it weighs materials that are ordinarily difficult to feed, to within a 1/16 oz. tolerance plus or minus, of specified weight.

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LOWER COST per Container

Packaging Machinery

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1—Colton No. 2 Combination Tube Closer and Clipper.
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8—World, Ermold and National semi-auto. motor driven Labelers.
1—McDonald "Weeks" type Auto. Labeler, adjustable.
Dry Powder Mixers, several with sifters, lab. size to 4000 lb. cap.
1—Colton 2B Gelatin Coating Machine.
4—Colton Dry and Wet Granulators.
1—Filler Mach. Co. 4 spout Filler, monel fitted.
1—U. S. Bottlers 22-spout Rotary Vacuum Bottle Filler, monel fitted, with conveyor.
5—Gravity and Vacuum Bottle Fillers, 2 to 6-spout.
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1—Ferguson "Packomatic" Filler, Weigher and Sealer.
1—Triangle class SR Carton Sealer.
2—200 gal. Pfaudler Jacketed closed Glass-Lined Kettles.
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MISCELLANEOUS—Kettles, Drug Mills, Ointment Mills, Pulverizers, Grinders, Sifters, Screens, Colloid Mills, Filters, Filter Presses, Coating Pans, Pill Mass Mixers, Pot Mills, Tanks, Stills, Agitators, Pumps, Boilers, etc. Send for complete bulletin.

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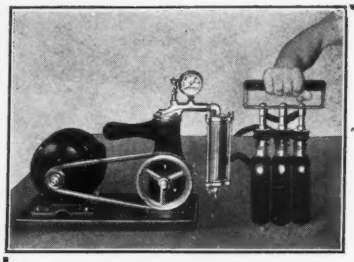

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Portable Mixers for any quantity of liquids, also Glass Lined Mixing and Storage Tanks.

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14 Sizes
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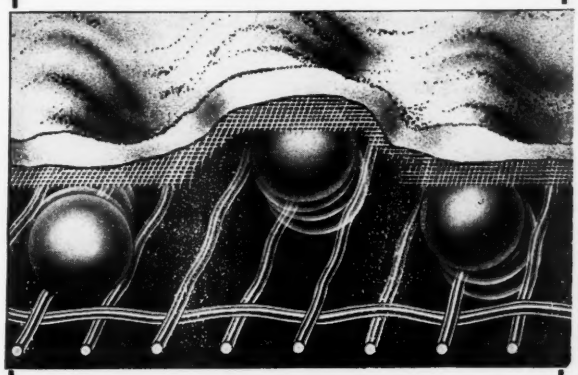
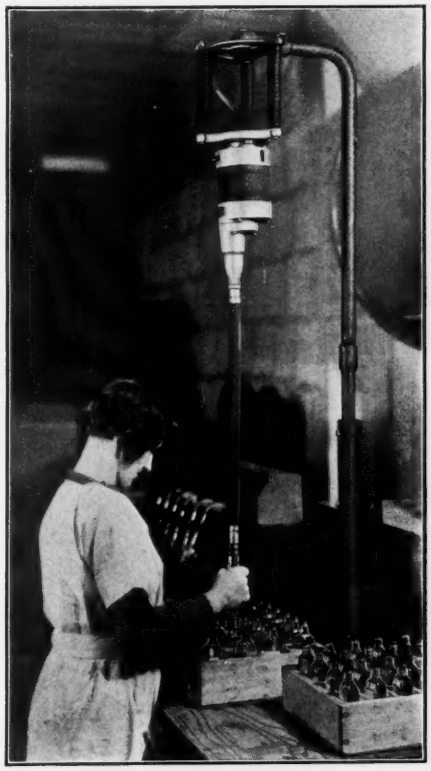


An exclusive feature with the DAY Ro-Ball "Stabilized" Gyrating Screen is the DAY Super-Active Ball Cleaning Device as illustrated above. This consists of a coarse mesh ball retainer screen which provides eight rebound points for each ball compartment. The balls rebounding against these eight points produce an evenly distributed vibration over the entire screen cloth, resulting in longer life for the screening cloth (particularly where a very fine cloth is used) as the wear is distributed over the whole surface of the cloth instead of a few lines of contact. The extra action caused by these eight evenly distributed rebound points will keep the cloth open and free, resulting in more efficient screening.

Whether your Screening Problem be large or small—coarse or fine—wet or dry—Investigate the DAY Ro-Ball "Stabilized" Gyrating Screen.

The J. H. Day Company
Factories and Principal Offices
Cincinnati, Ohio.

HERE'S THE ANSWER



to YOUR CAPPING PROBLEMS

● If yours is a large plant, here is a portable auxiliary machine that will soon pay for itself in labor saving and convenience. Adaptable to conveyor, bench or ceiling suspension, the Haskins Capper handles all styles, shapes and sizes of screw caps up to 54mm.

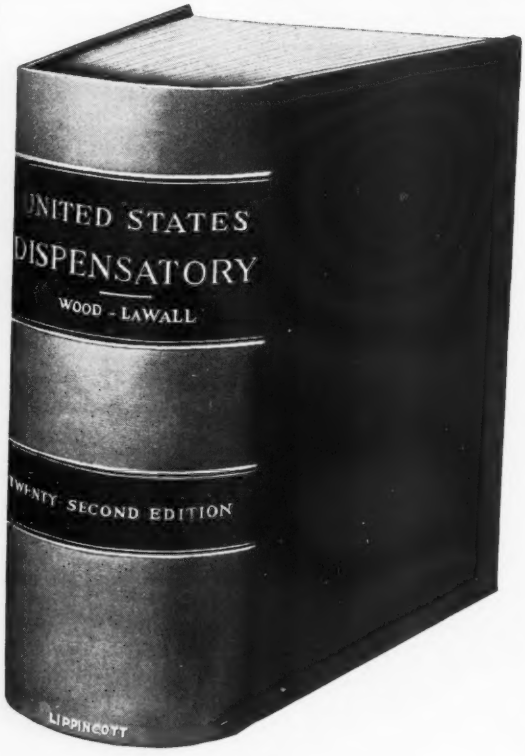
If yours is a small plant, here is an end to slow, unsatisfactory hand capping. Here is absolute uniformity that ends leakage and evaporation complaints. Here is maximum speed above 90 caps a minute. Here is new low capping cost.

SIX BIG FEATURES OF THE HASKINS CAPPER

1. High Speed—above 90 caps a minute uniformly and tightly sealed.
2. 3 Minute Change-Over from one style to another.
3. Real Flexibility—handles all styles of jars, bottles and metal containers in sizes up to 54 mm.
4. Portability—easily moved and adapted to conveyor, bench or ceiling suspension mounting.
5. Lessens Breakage—and does not mar finish of caps.
6. Quick Tension Adjustment—each cap driven to exact degree of tightness desired.

Write for full information and illustrated literature on the Haskins Capper. R. G. Haskins Company, 4648 W. Fulton Street, Chicago.

Haskins
FLEXIBLE SHAFT EQUIPMENT
with Greater Adaptability



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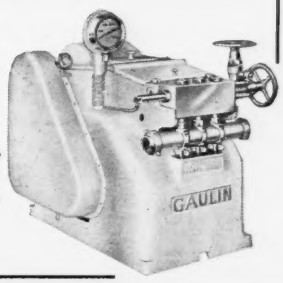
If you want to make fine products, make them with an M-G Two-Stage Homogenizer. Many sizes available.



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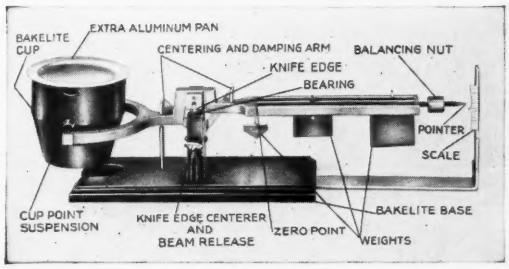

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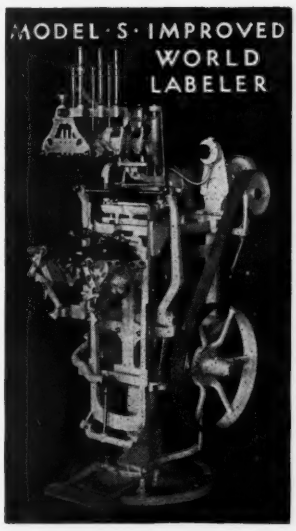

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If you wage a campaign against the shiny nose you'll win attention. If you let FACE POWDER BASE Z furnish the needed ammunition you'll win sales.

With FACE POWDER BASE Z women will learn to have confidence in your product. They will know that they are appearing at their best, that their make-up will stay put without frequent re-powdering throughout the day.

Other face powder manufacturers have proven that with FACE POWDER BASE Z a host of volunteers flock to their banners. FACE POWDER BASE Z is a proven SALES FORMULA you can't afford to overlook if you want to keep up with the march of time. Get your sample. A letter in today's mail may be worth a fortune to you later.

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GENERAL DRUG COMPANY

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Perfumers Shelf

SYNTHETIC JASMINE

The increasing popularity of flower scents, especially for Spring and Summer wear, has stimulated the production of new and interesting compositions by the perfumer. The rapid increase in the price of natural flower oils, especially jasmine, neroli, and absolute rose, has increased the demand for reproduction of the aroma of these flowers.

Most important at present is jasmine, which finds a thousand uses in various preparations. Many excellent artificial types have been produced, and recent development of new aromatic chemicals for this purpose has greatly assisted in approximating more closely the flower scent.

The products used in the preparation of an artificial jasmine vary to some extent depending upon the final use. In perfumes or toilet waters where discoloration is not important indol can be used. This valuable aromatic is present in the absolute flower oil and therefore is necessary in production of the finished duplication.

Unfortunately indol discolors in powders and creams and therefore it must be omitted from these products. Methyl anthranilate, also a valuable material in reproducing jasmine, cannot always be used for the same reason. Amyl cinnamic aldehyde is also an important adjunct. This aromatic develops a characteristic note of jasmine on drying, and also imparts the fatty note characteristic of the flower. It does not discolor if well made and free from impurities, but should not be used to excess. It is reasonable in price and is excellent for jasmine soap perfumes.

The flower oil by analysis is known to contain benzyl acetate, linalool, linalyl acetate, indol, methyl anthranilate, jasmone, and other bodies, some of which have been identified, such as geraniol and para cresol. Benzyl acetate is the most important constituent of artificial jasmine, and is present up to sixty-five per cent in the natural oil. Linalool and linalool acetate are also of marked importance and should be used in small amounts.

Ylang ylang is one of the few essential oils playing a part in synthetic jasmine and should not be omitted from the average formula. Where cheaper grades are desired, kananga may be substituted with fair results.

Fixation of artificial jasmine is best accomplished by the use of musk ketone, oleoresin of tolu, heliotropine, cinnamic alcohol, and phenyl propyl alcohol.

A formula illustrating the use of some of the materials mentioned is as follows:

Benzyl Acetate	650
Indol, 1% in Benzyl Alcohol	600
Phenyl Propyl Alcohol	10
Phenyl Propyl Acetate	25
Hydroxycitronellal	115
Phenyl Ethyl Alcohol	250
Methyl Anthranilate	17
Ylang Ylang Bourbon	55
Linalyl Acetate	120
Cinnamyl Alcohol	30
Amyl Cinnamic Aldehyde	120
Musk Ketone	25

COSMETIC PATENTS

A salve substantially free from soap and suitable for cosmetic purposes contains myristyl alcohol free from more than slight traces of other aliphatic alcohols, with a vehicle such as petrolatum and glycerine or an olive oil potassium soap. Walter Schrauth, U. S. Pat. 2,045,415.

A liquid preparation forming a smooth invisible film on the face is composed of about 3 parts of fresh uncooked albumin such as that from eggs and about 1.5 parts of 70% alcohol. V. Goncarova, U. S. Pat. 2,043,657.

"It's her perfume that gets me."

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Use **TEGIN** as the base for your greaseless creams and lotions; **PROTEGIN X** as the emulsifier for neutral nourishing and cold creams; and **TEGOLAN** for its cholesterin value.

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The COMPOUNDER'S CORNER

CLEANSING LIQUIDS

Additional uses now suggest themselves for the synthetic detergents described in the July 1936 "Compounders' Corner." Liquid cleansers, consisting of transparent, aqueous liquids, have become increasingly popular because of the ease with which they may be used. Very often they have consisted merely of relatively concentrated solutions of alcohol and glycerine which cleanse by dissolving oil and thus loosening adherent grime. If, however, the alcohol is concentrated enough to be an effective solvent, it is likely to be a drastic astringent. Using a one to three per cent solution of any of these wetting agents (the patent does not clearly restrict the use of sodium lauryl sulfate in this field), a real detergent effect can be accomplished. The exact amount of the wetting agent used will depend upon comparative tests of effectiveness. Alcohol and glycerine or glycol ethers should be present to help keep the solution clear and one of the several aromatic waters may be included for perfuming and for their cosmetic value. As a suggested formula: Sodium lauryl sulfate 2.5, glycerine 7.5, witch hazel 30.0, rose water 30.0, distilled water 30.0. The solution is applied to the skin by means of a pad moistened with it and then removed with a dry tissue. The operation is repeated if desired. The too drastic cleansing sometimes noticed when these new detergents are used for shampoos will not be apparent in this case since the method of use of the solution is very different and the concentration of the active ingredient is much lower than it is in shampoos.

"Now what is your bright suggestion for a pound of cure?"

SHAVING CREAMS

The important ingredients in a lathering shaving cream are those that soften the beard, making it easier for the razor blade to cut through hair, and the components that improve the condition of the skin. The softening effect is due to the swelling of keratin which is soluble in strong alkalies as well as in alkaline earth sulfides used in depilatories. The weak alkali present in lathering shaving soap probably has some influence upon the hair; it is more likely, however, that the soap as a whole, being an effective emulsifying and wetting agent, is the most active agent. Because of the emulsifying power, the surface coating of oil is removed from the hair. Then water can penetrate into the hair and exert a swelling and softening effect.

Glycerine tends to soften the skin, but should not be used in quantities exceeding 10 per cent because of the possible adverse effect upon the quality of the lather.

Lather is of course of great importance. It has a mechanical effect in supporting individual hairs while the razor blade shears through them. It should develop rapidly and be relatively longer lasting to permit the soap and other ingredients to exert their full wetting effect. The amount and quality of lather depends to a very large extent upon the oils and fats (or their fatty acids) used in making the soap.

The hardness of the water used in shaving is important. Water is made hard by the presence of soluble lime and magnesium salts; these react with the soda and potash soaps of the shaving preparation. The wastefulness involved here, in

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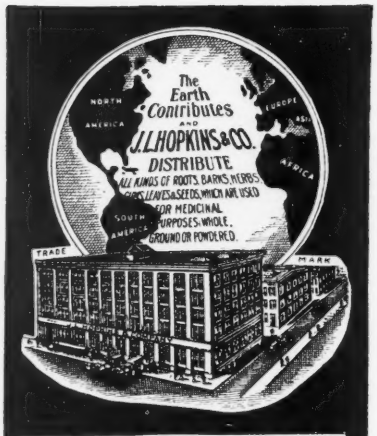

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Benzoin Gum	*Talcum*
Chalk (Precip.)	*Irish Moss*
Chinese Shavings	*Lavender Flowers*
Cuttle Fish Bone	*Olibanum*
Gum Arabic	*Orris Root*
Gum Tragacanth	*etc., etc.*

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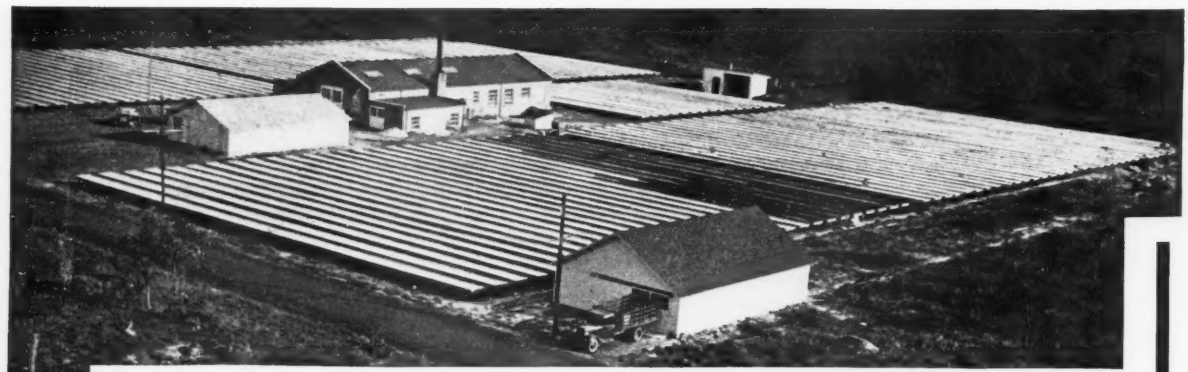

This is a photograph of our beeswax factory. It shows the large and numerous bleaching racks where—during the summer months—the beeswax lays in the open air and bleaches in the sunlight.

We have had 80 years experience in this method of bleaching beeswax by the sun. It excells all other methods. It does not bring the beeswax in contact with any chemicals. It results in a pure beeswax of high quality, especially suitable for cosmetics.

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the formation of inactive alkaline earth soaps, is less important than the fact that these soaps interfere with the emulsifying and wetting action of the original preparation. A water softening material, such as sodium hexametaphosphate should be added to the water to be used for shaving or, better yet, should be incorporated in the shaving cream.

Triethanolamine is a useful ingredient in shaving soaps. It is a very mild alkali and is not irritating to the skin. It has a marked softening effect upon hair and is an effective wetting agent. About 10 per cent may be added to a completely neutralized soap, using a non-reactive material such as lanolin or cetyl alcohol as the superfatting agent.

LIGHT SENSITIZATION

In a note in the Journal of the American Medical Association, H. F. Blum and H. J. Templeton feel it necessary to remind the physicians of the drastic photosensitization that can be caused by the administration of certain chemicals. Meyer-Betz in 1913 injected hematoporphyrin into his own veins and reported the consequences. For a period of two months he could not expose himself to even weak sunlight without suffering certain symptoms, which included wheals, erythema and extensive swelling of exposed areas as well as general malaise. Since the drug is used to some extent in the treatment of certain types of mental disorders, consequent sensitivity to light is by no means a theoretical possibility. Since doses used are far less than those tried by Meyer-Betz, sequelae are less drastic but nevertheless uncomfortable.

Hematoporphyrin belongs to a group of photodynamic dyes which include fluorescein derivatives. It is altogether possible that some cases of lipstick irritation may be caused by light sensitization through absorption of bromo acid.

Sensitization also results in pigmentation of the skin. It may be possible to use one of these compounds on the skin surface (not beneath the surface) to promote tanning; extensive research on a great variety of subjects will be required before it can be known that any such method is safe enough for general, widespread, use. Any person who goes into this subject unprepared will certainly run into such trouble as to make him wish that he had never heard of light sensitizing chemicals.

SUN SCREENS

The assumption now prevalent is that erythema producing and sun tan rays lie in the range between 2900 and 3100 Angstrom units. This assumption is only partially correct, however, since Bureau of Standards experiments have shown that sunburn can be produced by cadmium line rays at 3165 Angstrom units. Other research workers have found that burns without pigmentation can be produced in the region from 3165 to 3500.

The effective ingredient in any sun tan preparation is the chemical or chemicals which have the power to absorb the burn-producing rays. Certain natural products, such as Aesculin, were found to be active screens, but are too expensive to enjoy wide use. The finding of artificial substances which would do the job effectively has been a difficult task. A chemical may have very good light absorption in the desired region but its chemical nature may be such as to produce irritation of the skin, or it may be harmful when absorbed by the skin. Great care must therefore be taken, and extensive tests on animals and human beings must be conducted before a chemical can safely be recommended as a sun screen.

Colored chemicals, particularly yellow chemicals, generally have the power to absorb some of the burning rays, but the color of the compound is a serious drawback. The screen should not stain the skin, bathing suit, or linen.

Seven charts are given, showing the light absorbing power of various products.

Dr. Eric C. Kunz, The Givaudanian, January, 1937.

ESCALOLS

Escalols are a series of sun screens produced by Van Dyk & Co., Jersey City. Their development, properties and methods of use are described in pamphlets issued by the company and available for free distribution.

ESTIMATING TRIETHANOLAMINE

In estimating the amount of triethanolamine present in cosmetic creams and fatty emulsions, the material is saponified and evaporated to dryness with lime, and the powdered residue is extracted with boiling alcohol. The alcoholic extract, on evaporation, leaves a viscous residue containing any triethanolamine glycerine or ethylene glycol present in the original material. About 0.5 g. of this residue is treated with 0.5 mil of hydriodic acid (57%) and 5 mils of water, and evaporated to dryness in a glass dish. The residue is treated with 5 mils of pure isopropyl alcohol, transferred to a tared sintered glass crucible and washed three times with 5 mil portions of isopropyl alcohol, the crystals being sucked as dry as possible after each washing. The crucible and contents are dried to constant weight at 100°C. and weighed. A correction of one milligram for each mil of the solvent used in transferring and washing the crystals must be made. The weight of the crystals multiplied by 0.536 gives the weight of triethanolamine. The identity of the crystals is verified by the melting point of 169° C. The method is applicable to commercial triethanolamine. Satisfactory results are obtained with solutions of triethanolamine stearate and oleate, since the fatty acids liberated in the process are soluble in the solvent. H. R. Fleck, Analyst.

OIL SOLUBLE EPHEDRINE COMPOUNDS

The use of ephedrine oleate and similar compounds to obtain oil-soluble and non-stinging preparations is the subject of U. S. Patent 1,861,543, filed March 29, 1930 and issued June 7, 1932 to E. E. Moore and E. B. Carter and assigned to Abbott Laboratories. The object of the patent is to produce an ephedrine salt soluble in oil. It was discovered that when the alkaloid was combined with a fatty acid it produced a salt which did not cause the stinging sensation produced by the free alkaloid, and the salt was soluble in mineral oil. The compound is made by intimately mixing ephedrine alkaloid with the free fatty acid, melted if necessary. The resulting compound is soluble in water as well as in oils and could be used as an emulsifying agent. The solubility in oil of the compound increases with the number of carbon atoms in the fatty acid. The combinations with oleic acid or erucic acid are specifically mentioned.

COLD CREAM FORMULAS

Spermaceti 8.0, beeswax 7.0, almond oil 60.0, water 25.

Beeswax 15.0, stearic acid 3.0, mineral oil 31.0, vegetable oil 25.0, borax 1.0, water 25.0.

Paraffin 3.0, stearic acid 2.0, petrolatum 3.0, beeswax 12.0, mineral oil 37.0, vegetable oil 8.0, borax 1.0, glycerine 2.0, water 32.0.

Cetyl alcohol 10.0, beeswax 15.0, vegetable oil 25.0, mineral oil 24.0, borax 1.0, water 25.0.

Absorption base 25.0, beeswax 5.0, mineral oil 10.0, vegetable oil 10.0, water 50.0.

Stearic acid 16.0, lanolin 6.0, beeswax 6.0, vegetable oil 9.0, mineral oil 9.0, triethanolamine 4.0, glycerine 3.0, water 47.0.

Stearic acid 16.5, lanolin 2.8, beeswax 4.4, spermaceti 1.1, vegetable oil 4.4, mineral oil 8.8, triethanolamine 2.2, glycerin 8.3, water 51.3.

U. S. PATENT

For permanently waving hair while cold, it is treated with a softening composition containing a basic compound of an amphoteric metal such as sodium stannite and the softened hair is waved and treated with a fixing composition containing acid material such as aluminum and zinc sulfates and then with a composition such as magnesium sulfate solution to remove remaining excess of the treating compositions. Julian Y. Malone, Joseph H. Carroll and Charles R. McKee (to Perway Co.). U. S. Patent 2,061,709.

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	1	5	10	25	50	100
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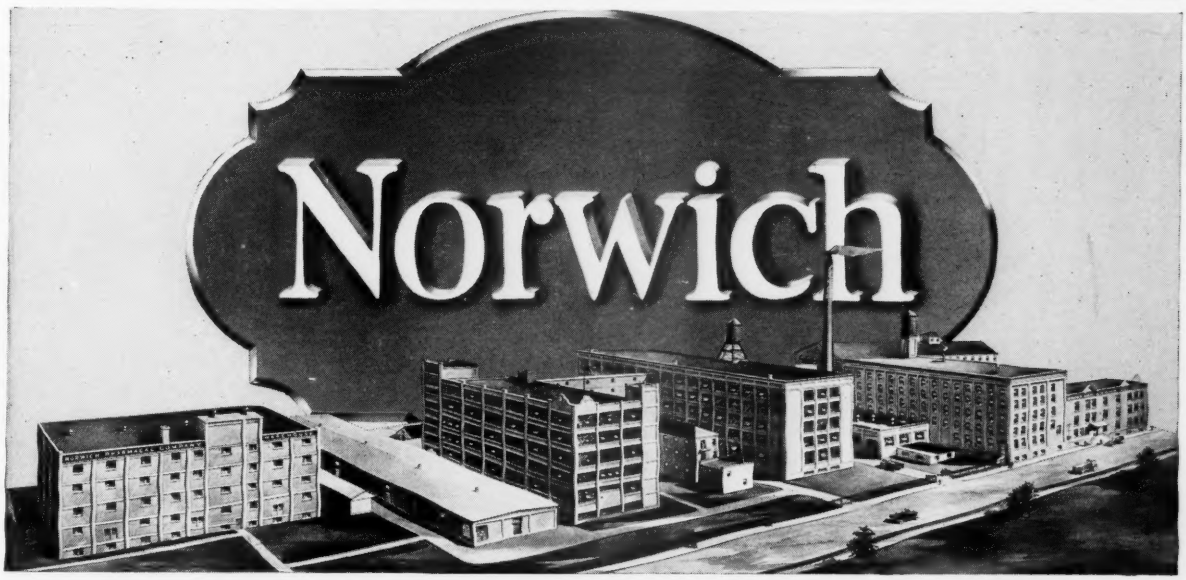

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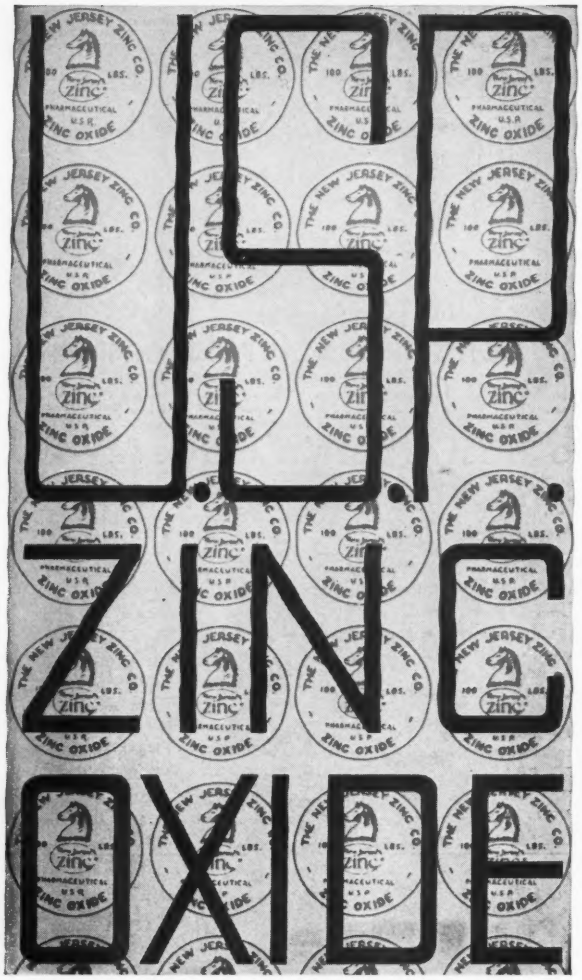

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ADVANCING THERAPY

DERMAL PARASITICIDES

In the accompanying list are the most important members of the group of drugs referred to as the parasiticides. They form the basis of present day antiparasitic therapy. There are other remedies which have not been sufficiently tested, but a thorough knowledge of the actions of a few valuable remedies and a sufficient acquaintance with their use is more important than the haphazard application of many. Much can be achieved by the proper combination of two or more of these medicaments, by variations in their respective percentages, and by the choice of the proper vehicle.

Peruvian Balsam	Sodium Thiosulfate
Chrysarobin	Betanaphthol
Pyrogallol	Sulfur
Iodine	Resorcinol
Mercury Bichloride	Salicylic Acid
Ammoniated Mercury	Benzoic Acid
Tar	Thymol
Phenol	Oil of Cinnamon

The parasitic group of diseases forms a large percentage of the total number of cases seen in the practise of dermatology. These are best grouped into those caused by vegetable parasites, the dermatophytes which belong primarily to the group of mucedinae or fungi imperfecti, and animal parasites including insects, acari, and worms.

At least two fundamental considerations are to be considered before the treatment of this group of diseases can be properly undertaken: the manner of action of the fungicides and the response of the individual to the infection.

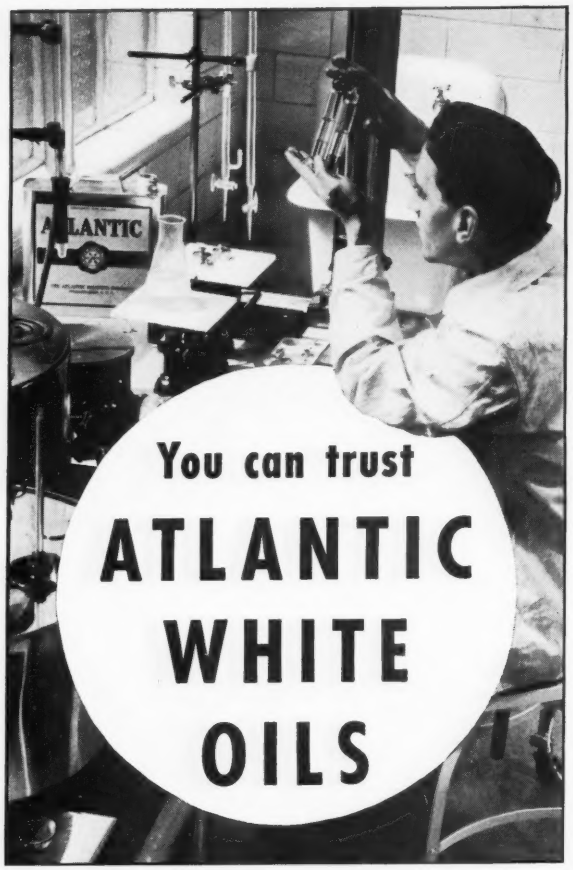
Numerous in vitro experiments belie the fungicidal power of most of the remedies listed, some of them even lacking fungistatic powers in high concentrations. Chrysarobin, pyrogallol, sulfur and sodium thiosulfate will not restrain growth of fungi in concentrations of 1:10, salicylic and benzoic acids possess fungistatic properties only in dilutions of 1:50 and 1:40 respectively, but the combination of benzoic and salicylic acids, which forms the basis of the most commonly used antiparasitic ointment, possesses fungistatic and fungicidal properties in vitro even in high dilutions. Iodine, phenol, betanaphtol and mercury bichloride are fungistatic in high dilutions and fungicidal in considerably stronger concentrations. Resorcinol is fungistatic in concentrations of 1:200 but is not fungicidal. Thymol and certain volatile oils, such as cinnamon and cloves, are highly fungicidal even in low concentrations.

Clinically, however, these substances are quite effective, complete cures being soon obtained even with the milder products. An explanation of the action of these remedies must therefore be sought on other than fungicidal grounds.

The clinically active remedies possess two common qualities: they cause exfoliation of the upper layers of the skin and they produce hyperemia when massaged into the skin. In addition, almost all of them are reducing agents. As reducing agents, they may cause destruction of fungi, aerobic organisms, by depriving them of oxygen. Exfoliation is produced either by a desiccating action such as that in the case of resorcinol, in which the upper layers of skin dry up and are cast off, or by keratolytic action such as that of salicylic acid, which causes swelling of the horny layer, with splitting into scales and exfoliation. Since, in the superficial invasions by fungi the latter live in the stratum corneum, they are cast off with the scales and clinical cure results without actual destruction of fungi. Histologic examination of normal skin treated with ointments containing these fungicides shows vascular dilation and evidence of inflammation, even though the inflammation may not be clinically evident. This inflammatory reaction may act in a manner similar to that of natural inflammations in bringing about the death of the parasite.

The most important member of this group, since it assumes major importance

"Let's try that treatment we saw in the Journal."



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EXACTING laboratory standards guarantee Atlantic White Oils to be of unvarying high quality and free from contamination. Such precautions recommend these oils to manufacturers of pharmaceutical, cosmetic and industrial specialties. Atlantic White Mineral Oils are the best science can make.

Where a U.S.P. oil is required, Atlantic recommends one of the series of ATREOLS ranging in viscosity from 80 to 345 sec., S.U. at 100° F. You will appreciate the tasteless characteristics of these oils. By making color measurements, you will note that they have less color than pure water.

ATLANTIC ODNOL is also a U.S.P. mineral oil, refined in America from Russian crude. The viscosity is 335 to 345 sec., S.U. at 100° F.

• We are in a position to make prompt shipment of Russian Mineral Oil. Our representative will be glad to call and discuss your further requirements.

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Cost as low as 9½c per lb.

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50 lb. cans	20c lb.	14½c lb.
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SEND FOR 2-LB. TRIAL CAN OF EACH

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Please ship me immediately 2 pounds each of GLYCOPON 2A and GLUCARINE B with full description and recommendations for use.

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Street.....

City..... State.....

from the standpoint of incidence alone, is the ringworm infection occurring on the hands and feet, the so-called athlete's foot There are primarily three clinical types, the interdigital variety, with scaling between the toes, accompanied by fissuring; the acutely vesicular type, which usually appears on the sole of the foot; the squamous or hyperkeratotic type.

There appears to be a widespread general impression that ringworm of the feet is so recalcitrant to treatment as to be considered incurable. The choice of the proper remedy diligently applied and continued in decreased concentrations long after the last vestiges of the disease have disappeared will serve to cure almost all cases. For the macerated, soggy, interdigital infection, alcoholic lotions are most suitable; for the hyperkeratotic variety, ointments are most effective.

In the following prescriptions, the use of the most effective remedies is illustrated. These stand high in the list of eczematogenous substances and the possibility of sensitization to one or another of the ingredients, with ensuing dermatitis, must always be kept in mind.

Measurements are in metric units. Iodine 1.2 g., salicylic acid 3.6 g., Benzoic acid 3.6 g., 90% alcohol to make 120 cc.

Salicylic acid 6.0 g., resorcinol 3.6 g., 90% alcohol to 120 cc.

Thymol 2.0 g., cinnamon oil 2.0 cc., 90% alcohol to make 120 cc.

Thymol 0.3 g., salicylic acid 1.0 g., 80% alcohol 30 cc.

Benzoic acid 12.0 g., salicylic acid 6.0 g., lanolin 5.0 g., petrolatum 77.0 g.

Ammoniated mercury 10.0 g., lanolin 5.0 g., beeswax 5.0 g., petrolatum 80.0 g.

Precipitated sulfur 15.0 g., lanolin 5.0 g., yellow beeswax 5.0 g., petrolatum 75.0 g.

Chrysarobin 6.0 g., lanolin 5.0 g., yellow beeswax 5.0 g., chloroform 4.0 cc., mineral oil 6.0 cc., petrolatum to make 100.0 g.

Thymol 1.2 g., boric acid 20.0 g., zinc oxide 60.0 g., talc 60.0 g., zinc stearate 60.0 g.

The following ointments are suggested for the treatment of ringworm of the scalp. Precipitated sulfur 6.0 g., salicylic acid 3.0 g., castor oil 6.0 cc., petrolatum to 60.0 g.

Pyrogallol 5.0 g., salicylic acid 5.0 g., castor oil 10.0 cc., petrolatum to 50.0 g.

The treatment of animal parasitic diseases offers a problem much less difficult, since the animal life is on the skin surface or in the horny layer of the epidermis. The parasite either is accessible or can be made more accessible by solvents of the horny layer and it is readily destroyed by even small concentrations of the parasiticides. The primary consideration should therefore be to do no harm, since the remedies employed are irritants in high concentrations.

Strong mercurial ointments should be avoided, the following being examples of satisfactory products. Precipitated sulfur 3.0 g., betanaphthol 1.8 g., lanolin 5.0 g., petrolatum to 60.0 g.

Equal parts of Peru balsam and 60% alcohol. F. Wise and J. Wolf, J. A. M. A.

SKIN PEEL

There is no perfectly satisfactory and absolutely harmless method of causing the skin to peel. Any method may cause too great a reaction with uncomfortable inflammation and slow recovery, and at times some cause increased pigmentation as an after-effect. For small areas carbon dioxide snow is one of the most accurately controllable methods; a few seconds' pressure will cause the formation of bullae. It has the disadvantage of making a sharply defined mark and, if too vigorously used, a scar. In babies and old persons it must be used with great caution.

Painting a small area with lactic acid, from 5 to 20 per cent. in water, once a day for several days will cause an inflammatory reaction followed by exfoliation. The use of ultraviolet rays is one of the controllable methods of causing exfoliation. The sensitivity of the skin must be known and the lamp warmed up a definite time before exposure in order to get the proper reaction. The great drawback to this and other methods is the resultant tanning or freckling, and if peeling is employed to remove pigment this is evidently unpractical.

The following is a nonmercurial preparation suggested by White:

	Gm. or Cc.
Ammonium chloride	2.0
Cologne water	30.0
Distilled water	240.0

This should be tested on a small area, for some skins become pigmented after an inflammatory reaction caused by the oil of bergamot in a certain kind of cologne water. Another perfume may be used in its place.

For the rapid removal of lesions of acne vulgaris, peeling pastes are used. One of the best is the following: (from Kren, O., Kosmetische Winke, Berlin and Vienna, Julius Springer, 1930, p. 25):

	Gm. or Cc.
Beta-naphthol	10.0
Flowers of sulfur	40.0
Green soap	25.0
Liquid petrolatum	25.0

This will darken to brown because of the oxidation of the beta-naphthol, but that does not interfere with its action. Only those with intact kidneys should be subjected to this treatment, for there may be absorption. Also it must not be applied to the whole face at once but to the cheeks and chin at one time and to the forehead and nose at another, to avoid a toxic reaction.

The skin should be cleansed with benzene or ether and then the paste is spread in a thick layer over the affected part. The clothing must be protected to avoid spotting. At first there is a burning sensation, which passes off soon. At the end of twenty or thirty minutes the paste is removed. The skin is red, but in a few hours it resumes its normal color. The application should be repeated every twelve hours or twenty-four hours until there remains a tightness of the skin or beginning exfoliation. The skin must not be washed with soap and water at this time but may be gently cleansed with 0.5 salicylic acid in alcohol. After the treatment ceases, the salicylic alcohol should be continued, followed by powder. If the treatment has been kept up five days, at least three or four will be necessary before peeling is over. During the treatment the urine must be examined and treatment should be stopped at once if albumin is found.

Such treatment is seldom used in this country, for it is difficult to control it exactly. At the best it takes more than a week, and there is always a possibility of too violent a reaction, a severely painful reaction and possibly pigmentation as a sequel. To obtain satisfactory results, it may have to be repeated. J.A.M.A.

DELIRIUM TREMENS

Sperber points out that the sodium salt of n-methyl-cyclohexenylmethyl malonylurea immediately after intravenous injection in ordinary therapeutic doses aborted the attack in three typical cases of delirium tremens. The patients fell asleep for a period of from two to four hours, at the end of which they awoke for a brief interval and then returned to a deep sleep, the latter being the usual reaction following the natural ending of an attack of delirium tremens. On awaking, all were fully oriented and had no recollection of the attack. At no time was there a recurrence of symptoms. The observations suggest that the drug may be a specific remedy for delirium tremens, and this small series of cases is reported in the hope that its true value will be determined by others. Its possible value as a preventive in the predelirium state and as an abortifacient in acute alcoholic psychosis is suggested. *N. E. Journal of Medicine.*

BURN OINTMENT

According to A. Kissmeyer, an ointment of silver nitrate has been used successfully for about twenty-five years for the treatment of less severe burns and scalds in the skin department of the Kommune-hospital, Copenhagen. The ointment's composition is as follows: silver nitrate 0.25 g., distilled water 20.0 cc., olive oil 25.0 g., lanolin 50.0 g. The burn is cleansed with sterile normal saline and the vesicles are removed; a thick layer of ointment is applied on a piece of old soft linen, which is then covered with an imperishable material like oil-silk, and held in place by a gauze bandage. The ointment is renewed once a day, the burn each time being cleansed with normal saline. *Lancet.*

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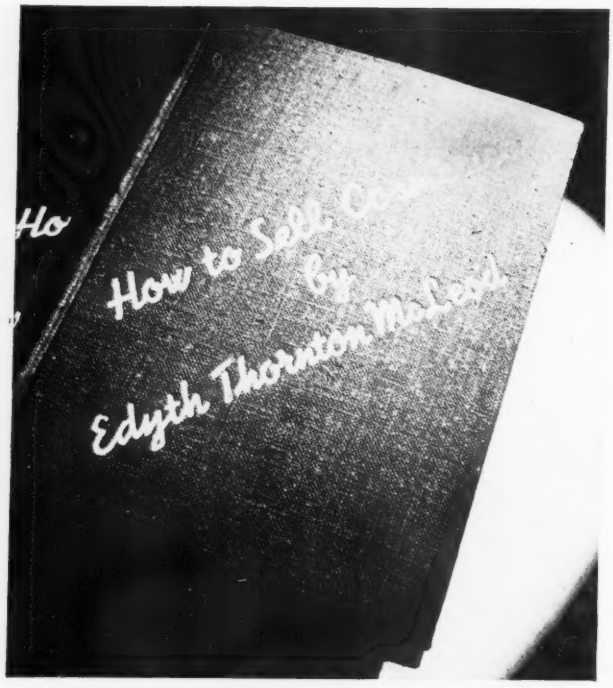

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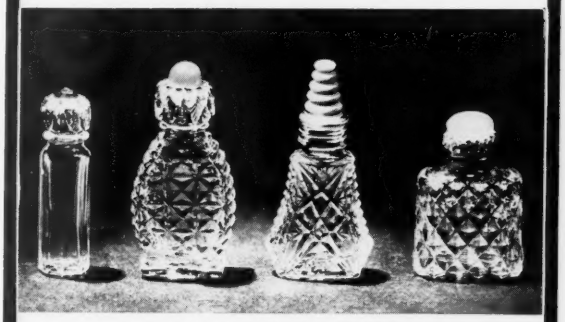

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WAVE SET

We make a concentrated gum waveset which is very popular because it has proven to be quite effective. The product is sold in the form of a paste which when mixed with water immediately forms a medium thick solution which is the finished waveset. We have had some complaints, however, that the solution will occasionally become thin on standing. Since we have what seems to be enough preservative, we are at a loss to understand what causes this thinning. We are sending you a copy of our formula and would appreciate any suggestions you can make that will help us out of this difficulty. Montreal.

The amount of preservative called for in your formula is adequate and since you make no mention of the development of odor, there is apparently no bacterial decomposition taking place. There are two very definite possibilities, however, which probably hold the key to the solution of your difficulties. In the first place, gum karaya is a natural product and is therefore subject to all the factors which make for non-uniformity. This is so completely the case that even the most reputable gum suppliers find it difficult to guarantee the uniformity of karaya. When you make up each batch of concentrate set aside a small amount of gum in the form of an aqueous solution containing preservative; the behavior of this solution over a period of weeks will show you how uniform your gum is.

In this case it is more likely that your trouble is due to an excessive amount of alkali used for clarifying the gum and imparting stringiness. Only just enough KOH should be used to make sure that the powdered gum and alcohol mixture becomes neutral over night. If you wait for several days for the mixture to show neutrality to phenolphthalein, then gum is gradually being broken down. The net result is that the gum has undergone some chemical reaction that hastens its breakdown on standing. We suggest that you reduce the quantity of alkali to about 1-3 the present amount. Mix the batch in the usual manner and test the next day with phenolphthalein. If the mixture is faint pink it is ready for packaging; if it is colorless add only enough KOH to make the mixture faintly pink. In this way you add varying amounts of alkali depending upon the acidity of the gum you use. Enough alkali will thus be present to give desired properties to the solution, but an excess will be avoided.

ADHESIVE—CLEANING ARTIFICIAL DENTURES

Can you supply us through your "Readers Questions" with the formula for water-proof adhesive such as is used for surgical adhesive tape. We should also like a formula for powder dissolved in water for the cleaning of artificial dentures. The dental appliance is allowed to stand in the solution for a few minutes and then rinsed without the necessity of brushing. We enjoy your publication very much and wish to avail ourselves of the service offered by the "Readers Questions" department. Detroit.

The following directions are given for manufacturing adhesive in the British Pharmacopoeia: Macerate masticated india rubber (in fine strips) 3¼ oz. in solvent mineral naphtha 19½ oz. (by weight) until a homogeneous jelly is obtained. Melt lanolin 8½ oz. and balsam copiba 1 oz. and heat to 100° C. for ten minutes. When partly cooled, stir in solvent mineral naphtha, 4¾ oz. (by weight), then zinc oxide 3¼ oz., thymol 28 grains, and methyl salicylate 46 minims. When quite cold, add the rubber solution and mix thoroughly. Preferably should be spread at once.

We have not examined artificial denture cleaning preparations but you can undoubtedly make a satisfactory product by the use of trisodium phosphate. This is white crystalline powder which dissolves in water and about a 10% solution would make a very fine cleaning solution.

PRESERVATIVE

In the June 1930 issue of your valuable publication, you include a formula for a hand lotion or liquid cream. No antiseptic or preservative is mentioned in connection with this formula and I should like to ask you if such a preservative is not necessary for preserving both the lanolin and peanut oil mentioned in the formula. Does the lactic acid exert an antiseptic action in the above composition. Kindly advise just what preservative if any should be used and the percentage required. Mexico City.

readers'

Lanolin is not especially subject to decomposition and peanut oil is fairly stable. A preservative is, however, so generally necessary in products containing substances of animal or vegetable origin that we assume that they will be used and are not always mentioned in the formulas. Since bacteria do not in general grow as readily in acids as in alkaline solutions, the lactic acid in this case will act to some extent as a growth retarder. Nevertheless, it is advisable to include about 1-20 of 1% of methyl para hydroxybenzoate in the formula, dissolving this compound in part of the hot water.

LEMON RINSE

We would greatly appreciate your sending us several formulas for lemon rinse. Boston.

Lemon rinse is a dilute solution of a weak acid used to remove lime soaps deposited on the hair when shampooing is done with hard water. Use one to three per cent. of any of the following acids dissolved in water: Acetic acid, lactic acid, citric acid, tartaric acid, etc. The use of strong mineral acid should be avoided. Color with a yellow acid dye and use a water soluble acid resisting lemon odor.

GREASELESS COLD CREAM

Can you supply us with a formula for greaseless cold cream?

We believe that such a formula was published in one of the issues of your magazine, but unfortunately some of our back issues are missing and a careful search of those we still have fails to bring to light this particular formula. Chicago.

A greaseless cold cream is more or less a contradiction of terms since a cold cream consists of oil, emulsifying agent and water. However, a cream with cooling effect, containing no grease and very similar in appearance to cold cream can be made by the use of glycerol monostearate. Heat 15 parts of glycerol monostearate with 5 parts of glycerine and 80 parts of water and stir until a homogeneous cream is obtained. If a whiter product is desired, mix in 1 to 2 per cent of finely divided titanium dioxide.

questions

NON-ALLERGIC PREPARATIONS

Kindly advise us regarding the requirements and ingredients in non-allergic face powders, hair lotions, soaps, hair shampoos, etc. New York.

This is a strictly negative sort of question since we cannot tell you what goes into non-allergic preparations but merely hint at what should be left out. Orris root, for instance, although practically never used now, was responsible for a great deal of allergic reaction to face powder. Allergy is the sensitivity of a comparatively small number of persons to items which are perfectly harmless to others. Until you have made a fairly complete study of the whole subject (or retained the services of an able dermatologist specializing in this field) you cannot say whether or not a given product will cause allergic reactions.

EMULSION

We would appreciate your favoring us with a suitable formula containing the following ingredients in the form of an emulsion that will stand up for a few months or so: liquefied carbolic acid, bicarbonate of soda, menthol, carron oil, Brooklyn.

You do not mention whether the phenol or the bicarbonate is to be in excess, which would determine whether the solution is acid or alkaline in its reaction. In addition, carron oil is a mixture of equal parts of lime water and linseed oil. With all these components it does not seem likely that you can make a stable emulsion. Your best bet is to experiment with various gum or gum mixture solutions as emulsifying agents. As the doctors would say, the prognosis is not good.

FEMININE HYGIENE JELLY

As a subscriber of the Drug and Cosmetic Industry Magazine, and as a manufacturer, I would like to add another product to my line, i. e., a feminine hygiene jelly to be packed in tubes and applied by means of a glass tube. I should greatly appreciate any information on the formulation of a product of this sort that you could give me. Kansas City.

A product such as you describe need contain only one to two per cent. of an organic acid such as lactic or acetic acid with or without the addition of the same amount of boric acid. The medium must be water soluble, spread well, and adhere well and generally consists of a gum mixture. According to a recent report in the literature, jellies made with glycerite of starch base have the best viscosity and adhesive properties. A concentration of 25% glycerine, with the addition of gum karaya or tragacanth for proper consistency, rarely exhibits the irritating and hygroscopic properties of the U.S.P. Glycerite of Starch, containing 70% glycerine.

HAIR DYE

Would you be good enough to tell we whether . . . contains aniline, and, if so, in what amount? Jersey City.

To our knowledge no hair dye contains aniline as such but many of the most important ones contain various derivatives of diamines. If, as seems likely, you are interested in the toxicity of a product, you can best determine this by observing the precautions generally mentioned by the manufacturer on the label. There unfortunately does not seem to be now available any absolutely safe hair dye which is at the same time permanent and otherwise satisfactory.

MASSAGE CREAM

We expect to place on the market a good massage cream and should like a formula for such a product. We wish to have one that is not too greasy yet will last for the duration of the massage. We should also like to duplicate . . . Des Moines.

Since you desire a cream that is merely a lubricant for use during the massage, a petrolatum, mineral oil, paraffin mixture (liquefying cleansing cream) or a cold cream cleansing cream would serve your purpose. You will find formulas for each of these in a recent article devoted to cleansing cream in "The Drug and Cosmetic Industry."

We cannot give you formulas for well-known products now on the market even when we know these formulas. You will have to apply to a consultant to undertake this work for you.

LABEL APPROVAL

We are marketing the hair preparation for which labels are enclosed. You will note that the product is labelled as an antiseptic and that under the Directions, statements are made as to what conditions the product will eliminate. Will you tell us whether or not we must submit this product for approval under the Federal Food and Drugs Act? St. Louis.

Because of the fact your product is labelled "antiseptic," and also for the reason that therapeutic claims are made for it under the Directions, your product comes within the scope of the Federal Food and Drugs Act. Cosmetics do not come within the scope of the act unless remedial claims are made for them, such as is the case in your preparation.

There are two ways in which you can proceed. One way is to pay a visit to the Food and Drug Administration, of the Department of Agriculture, in Washington, which department is charged with enforcement of the Food and Drugs Act. You can consult with them and see if they approve the label in its present form, or if they will suggest modifications which they will accept. The Administration will not give you a written statement definitely accepting a label for the reason that new developments might cause them to seek further modifications. But they will tell you what they will accept at the present time if you are willing to cooperate with them in enforcement of the law.

Another method is for you to build up your own evidence for the antiseptic properties of the product and for the clinical results obtained in correcting the conditions mentioned on the label. You can keep this evidence to yourself and never go near the Food and Drug Administration. You can then proceed to market your product. Then if the Administration writes you and advises you that unless you make certain changes, your product will be seized, you can produce your evidence. Perhaps in this case, if you were sure of your case, it would be better to wait unless action was taken against you and then produce the evidence in court. However, some firms do not like the stigma of a seizure even though they would be certain to win the case. Perhaps this would be your state of mind.

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FEBRUARY MOVEMENTS

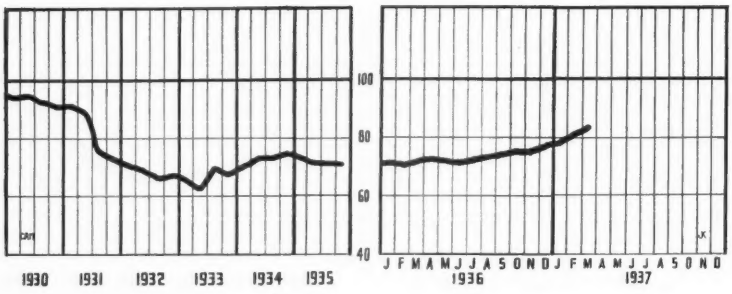
Up

Agar agar 20c
Almond oil, sweet 2c
Anisic aldehyde 75c
Apricot Kernel oil 4c
Balsam Copaiba Para 5c
Buchu leaves 25c
Camphor oil, Sassafrassy 3c
White 3c
Cardamom oil 50c
Cascara Sagrada 1c
Cassia oil, Redistilled 10c
Cubebs oil 15c
Echinacea root 4c
Ergot 30c
Ginger oil 50c
Glycerin C. P. 6c
Henna leaves 1c
Iceland moss 1c
Japan wax ½c
Mace oil, distilled 5c
Myrrh gum 25c
Nutmeg oil 2c
Origanum oil 10c
Pimento berry oil $1.00
leaf oil $1.00
Quince seed, Persian 5c
Spanish 15c
Rosemary oil 7c
Saffron Valencia 50c
Safrol 3c
Sarsparilla Root, Mex. 6c
Tonka Beans, Angostura 15c
Tragacanth Gum No. 1 5c
No. 2 5c
Witch Hazel leaves ½c
Wormseed American 10c
Wormseed oil 15c

Down

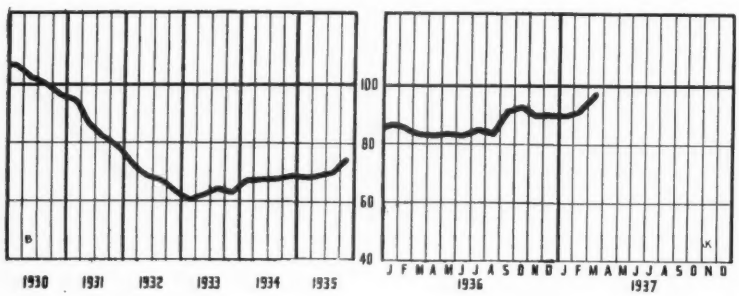
Acetylsalicylic acid 5c
Anise oil USP 5c
Arabic gum White No. 1 1c
Seconds 1c
Benzonin gum, Sumatra 4c
Carnauba wax No. 1 1c
Citronella oil, Ceylon 3c
Java 3c
Citronellol 10c
Colocynth pulp 6c
Grape fruit oil 35c
Lemon grass oil 5c
Potassium Iodide 7c
Saw Palmetto berries 2c

25 Cosmetic Raw Materials—Unweighted Price Index. 1926 = 100.



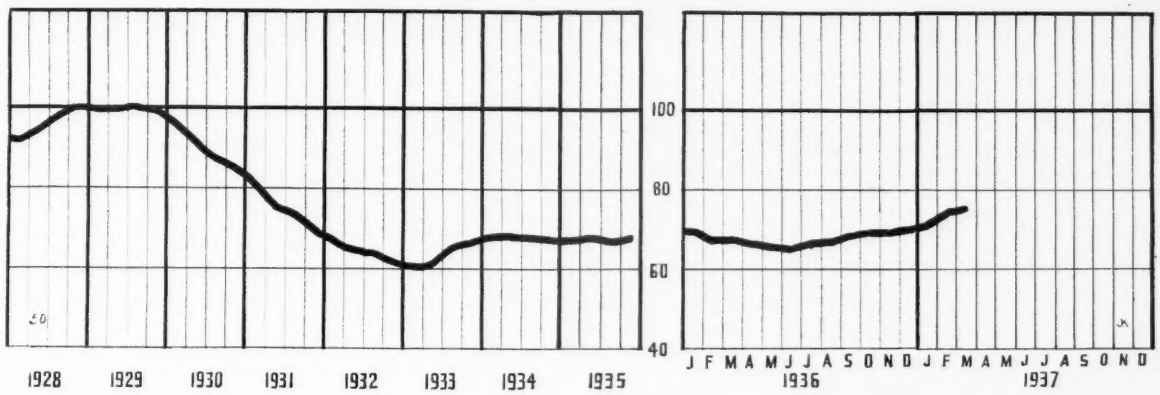
The cosmetic raw materials group registered a net advance in price, the index increasing from 81.7 in February to 83.8 in March. Balsam copaiba increased 5 cents to 47 cents; glycerine continued upward, reaching 31 cents; Japan wax increased from 10½ to 11 cents; quince seed jumped from 60 to 75 cents; tragacanth rose from $2.75 to $2.80.

15 Botanicals—Weighted Price Index. 1926 = 100.



Four advances in price were responsible for a jump in the botanicals index from 91.6 in February to 97.9 in March. Agar-agar increased from 80 cents to $1.00; buchu rose to 80 cents from the previous 55 cents; cascara sagrada was one cent higher at 13 cents; ergot rose 30 cents to $1.95. Reports from Japan indicated that unfavorable weather conditions interfered with the bleaching of agar to the extent that production was delayed.

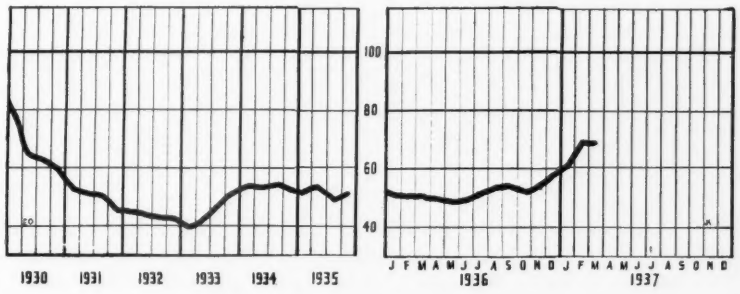
50 Raw Materials—Weighted Price Index. 1926 = 100.



For March 1937 the Drug and Cosmetic Industry index of 50 commodity prices stood at 75.2 compared with 74.6 in the previous month. Under production in many botanicals and therefore difficulty in affecting replacements became more acute during the period under review. This situation was particularly noticeable in such items as colombo root, senega, buchu, ergot, quince seed, etc. The essential oil market also continued very firm as a whole with conditions reflecting the advanced season when unsold stocks of most items are not heavy.

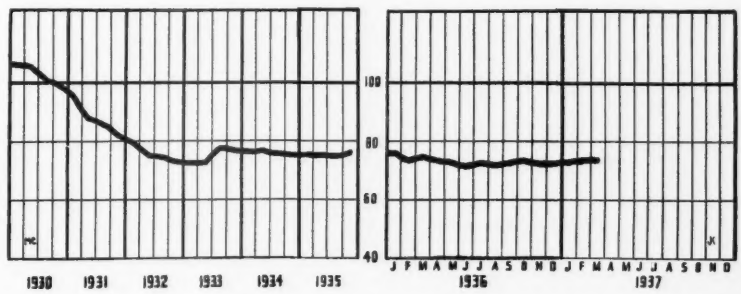
15 Essential Oils—Weighted Price Index. 1926 = 100.

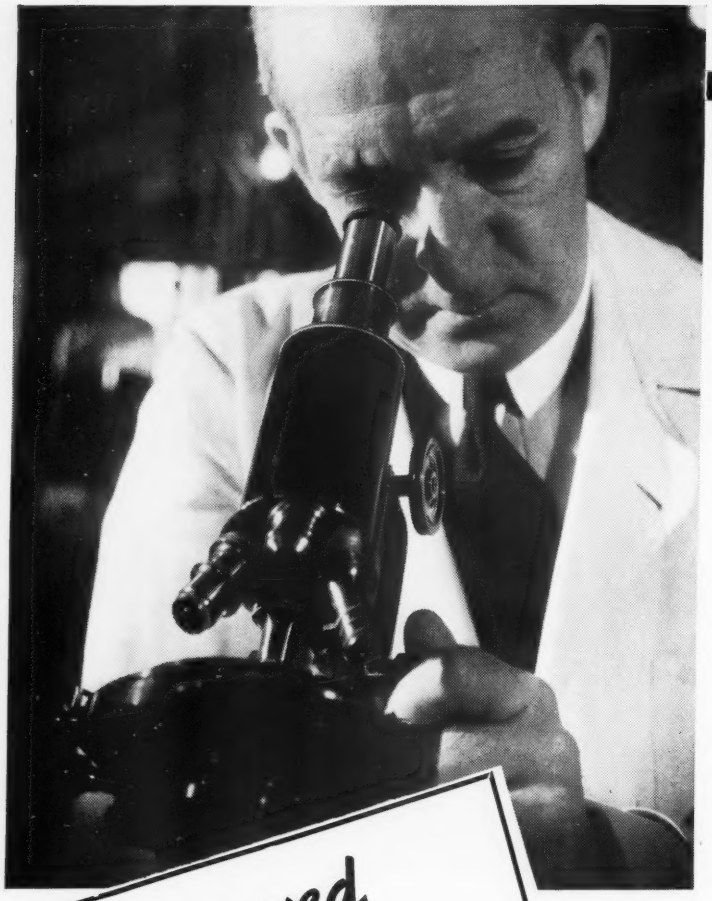
The essential oils index declined slightly, from 69.1 in February to 68.9 in March. Anise was five cents lower at 90 cents; citronella declined from 48 cents to 45 cents; cassia increased 10 cents to $1.10. Lemon, orange, bergamot, anise, cassia, the camphor oils and the spice oils were among the strong points in a generally firm market.



15 Medicinal Chemicals—Weighted Price Index. 1926 = 100.

The medicinal chemicals index remained stationary at 73.5, changes in the prices of acetylsalicylic acid and cod liver oil exactly counterbalancing each other. Acetylsalicylic acid decreased from 55 cents to 50 cents while cod liver advanced one dollar to $26.00 a barrel. One of the features of this market was the strength in cod liver oil in spite of the huge advance in imports which totaled 5,790,000 gallons for the year 1936.





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AGAR AGAR

Japanese agar advanced 20c per pound in the spot market. Strong undertones prevailed at the higher level and it was said that only the presence of some spot competition prevented the market from more adequately reflecting the shipment market position. Prices in Japan were often higher than the minimum spot quotations.

A scarcity is said to exist in Japan. This has been attributed to the unfavorable weather which prevailed during the bleaching season. Agar is bleached high in the mountains behind Kobe during the cold winter months. It is placed out of doors on racks and it is the action of the cold and sharp frosts which turn it the white color in which it appears on the market here. Protracted warm or rainy weather would seriously delay the bleaching and might also result in a minimum production of the better grades which are required by the pharmaceutical trade.

The quantity of agar imported into the United States during 1936 was the highest since 1933, and the value was the highest since 1931, according to a report by the Department of Commerce. The average declared import value of 44c a pound was the highest since 1931.

Total United States imports for 1936 amounted to 625,000 pounds valued at $275,000 as compared to 451,000 pounds valued at $162,000 in 1935.

There has been a steady increase in the importations of Japanese agar by the United States. In 1918 the total aggregated 262,000 pounds and with few exceptions the trend year by year has been upward reaching its peak in 1936.

Domestic consumption is attributed not only to the fact that physicians prescribe it frequently, but to the increase in popularity of several proprietary emulsions containing agar now on the market.

GUM TRAGACANTH

An exceptionally firm market continues in gum tragacanth. Spot prices for number 1 gum now range from $2.80 to $2.90 per pound with the range on number 2 at from $2.35 to $2.40.

Reports reaching this market indicate an acute shortage of gum in the primary market with little prospect of relief from this situation until a new crop can be collected. It will probably be August or September before new gum arrives in this market so that the prospects are that prices will continue firm for several months yet.

United States imports of gum tragacanth during 1936 were considerably lower than for 1935 amounting to $2,093,000 pounds and 2,474,000 pounds respectively. Stocks available on spot are small and it was said that some factors are already unable to quote on new business.

GLYCERIN

The market continued strong to the point that quotations ranging from 31c to 34c per pound for C.P. material were nominal. Undersupply contended with an excellent demand. The result was that buyers were unable to place prompt delivery orders with the producers. There was nothing in the situation which would indicate an early return to a position whereby producers could supply all requests promptly and freely.

Preliminary import statistics for refined glycerin indicate a sharp advance during 1936 amounting to 3,447,487 pounds as compared to only 68,366 pounds in 1935. Preliminary estimates of production for 1936 also indicated an improvement over the previous year with 85,386,327 pounds of chemically pure material as compared to 74,704,505. Stocks on hand as of December 31, 1936 were lower, however, being indicated as 13,351,309 pounds as compared to 14,529,525 pound as of the same date in 1935.

MENTHOL

There was very little change during the past month in the situation prevailing in Japanese menthol. Prices on spot were continued at from $3.30 to $3.40 per pound. At times this represented a figure close to or even below the primary market. It would seem that the Japanese market is still feeling the effect of speculative buying on the part of many Japanese who would rather have raw materials than currency.

Imports of menthol during 1936 jumped sharply, according to a report by the Department of Commerce, amounting to 342,000 pounds valued at $831,000. There has been a steady upward trend in imports of menthol from Japan. In 1908 the total was only 20,000 pounds while in 1934 the total amounted to some 425,000 pounds.

Statistics so far do not indicate that the inclusion of synthetic menthol in the United States Pharmacopoeia has affected imports of natural menthol. The opinion was expressed in one quarter, however, that it is logical to assume that the synthetic material will gradually become a factor and will eventually assume a position of importance in the market.

OIL ROSEMARY

A fair demand for this oil found the spot market short of supplies. Irregular shipments from the primary market made it necessary for supplies to protect their position. Prices were advanced to from 55c to 65c per pound as to quantity. This represented a 7c advance from prices prevailing a few weeks back.

QUINCE SEED

After a long period of price stability the market has advanced materially. Persian quince seed is currently selling on spot at 90c per pound. A recurrence of demand found the market here insufficiently supplied and the primary market unwilling to offer other than at sharply higher prices.

It was said in one quarter that the Persian Government has taken control of this item and was interested in manipulating the market in a way similar to their recent activities in gum tragacanth. It might be recalled that since the government intervention in tragacanth the market for this item has advanced about $1.25 per pound and it might be quite possible that the top price in Persian quince seed is not yet in sight.

Spanish quince seed is also materially higher at 75c per pound for the very limited quantities still available. In fact the market is said to be practically nominal at the above quoted price in view of the small supplies on spot. This situation, of course, has given added strength to the Persian market.

PEPPERMINT OIL

Spot prices for peppermint showed stability but this was said to be due mainly to the absence of unsettlement in the primary market. Prices remained at $2.25 to $2.50 for natural oil and from $2.50 to $2.80 for the redistilled. As the season is now well advanced it does not seem likely that substantially higher prices will prevail between now and the new crop. Such a trend would only be likely should there be an unexpected sharp rise in consumption.

Exports of 386,000 pounds of peppermint oil from the United States in 1936 established a record for the past 15 years.

The total production in 1936 amounted to 932,000 pounds of oil of which 560,000 pounds were produced in Michigan, 248,000 in Indiana, 80,000 in Oregon, 31,000 in Washington and 13,000 in Ohio. The output of peppermint oil fell from 1,103,000 pounds in 1930 to 421,000 in 1932, but rose to 503,000 in 1933 and 873,000 in 1934. The 1935 figures showed a total production of 1,352,000 pounds, the largest amount produced in recent years.

The tendency is for an increasingly large percentage of domestic output to be sold in foreign markets. In 1934 approximately 47 per cent. of the total crop was exported, compared with 63 per cent. in 1932, 34 in 1931, and 21 in 1930.

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CITRUS OILS

A strong market continued for lemon and orange oils both domestic and imported. The market seemed to suggest continued strength of a kind likely to keep the market tending upward when demand expands in the not far distant future.

The general opinion is that the Italian lemon crop was a third less than that of last season. Well-informed observers admitted the production of lemon oil in the 1935-36 season amounted to around 1,300,000 Sicilian pounds, according to a report by the Department of Commerce.

Exports of essential oils from Messina for the period December-October 1935-36 amounted to 456,457 kilos as compared to 1,186,756 kilos for the similar period of 1934-35. The total decrease from last year shown by these figures is 61.5 per cent. England took slightly over one per cent. of its purchases in the preceding season, France's takings decreased 50.8 per cent., Germany's 33.9 per cent. Only the United States showed an increase of 36.7 per cent. the total for the 1935-36 season being 186,305 kilos as compared to 136,258 kilos for the 1934-35 period.

Supposing that these were divided in the ratio of 65 per cent. lemon oil, 25 per cent. bergamot oil, and 10 per cent. orange and mandarine oil and subtracted from the estimated production of these essences in the 1935-36 season, the following approximation of the present stocks on hand could be obtained: Estimated production of 1935-36 season 1,200,000 Sicilian pounds of lemon oil, 500,000 pounds bergamot and 100,000 pounds of orange and mandarine. Exports through October, 1936: 530,000 Sicilian pounds lemon oil, 203,500 pounds bergamot and 81,500 pounds orange and mandarine. Approximate stocks on hand in Italy 670,000 Sicilian pounds lemon oil, 296,500 pounds bergamot and 18,500 pounds orange and mandarine.

It is assumed advisedly that all stocks had left the country prior to the application of sanctions in November, 1935.

Considerable interest is being taken in the development of the shipment market for new crop French Guinea orange oil. The opinion is that present prices for this oil are cheap and that further appreciation in market values may be anticipated. Circumstances would appear to justify this forecast. Stocks of old oil are negligible, but there is a moderate quantity of new oil being held pending developments but this would not be sufficient to meet a normal season's requirements.

ERGOT

Spot quotations for this item were again advanced and the situation in general again look very serious. The range of prices in this market were from $1.95 to $2.10 per pound representing an advance of 30c per pound during the past month.

From Europe came reports of the smallest stocks in many years. Practically nothing was being shipped from Spain and even Portuguese shippers, who previously succeeded in obtaining Spanish material, had little to offer.

Imports of ergot into the United States for the first six months of 1936 amounted to only 69,000 pounds as compared to 103,000 pounds for the same period of 1935. These figures are in sharp contrast to the 331,000 pounds of this material imported in 1933.

WORMSEED OIL

Stocks decreased considerably on spot. Also small shipments from the primary market tended to strengthen the market here. Prices were up locally to from $2.65 to $2.75 per pound.

COD LIVER OIL

Prices in the spot market held quite firm at from $27.00 to $28.00 per barrel although there was little activity as far as new business was concerned. Buyers seemed to hold fair sized stocks and the supply in hands of importers was sufficient for reasonable needs.

Notwithstanding the growing popularity of various vitamin concentrates such as viosterole, haliver oil and many others, imports of cod liver oil into the United States during 1936 amounted to 5,790,000 gallons valued at $3,547,000. During 1935 imports amounted to approximately 4,600,000 gallons valued at approximately $3,000,000. Norway furnishes the United States with approximately 60 per cent. of its cod liver oil requirements. Other important sources are Iceland and Newfoundland.

Bergen reports fishing for the current season continued in a satisfactory manner with results to February 13, 18,100 tons of cod and 9,444 hectol. of oil, compared with 15,262 tons of cod and 7,864 hectol. of oil on the same date in 1936, and 8,477 tons of cod and 4,010 hectol. of oil in 1935.

POTASSIUM IODIDE

Because of competitive conditions quotations on potassium iodide have been lowered 7c per pound, thus establishing the market at 93c in 250 pound barrels and 95c in 100 pound drums. Quotations are for prompt shipment only, no contracts being entered.

Iodine resublimed U.S.P. and other iodides remain unchanged.

ACID ACETYLSALICYLIC

With the culmination of the heavy consuming season manufacturers of acid acetylsalicylic acid have reduced prices 5c per pound and now quote U.S.P. powder or granular in 225 pound barrels at 50c per pound with the range to 51c per pound in 25 pound drums. Granular with 10 per cent. starch green, white or pink is quoted at 47c per pound in 250 pound barrels and 48c per pound in 25 pound drums. With 16 per cent. starch white (only) the price in 250 pound barrels is 44c and 45c in 25 pound drums. With 20 per cent. starch white (only) the range is from 42c to 43c as to quantity. Contracts are now being entered for the remaining months of 1937.

VANILLA BEANS

The spot market continued firm to strong although no further price changes were noted during the period under review. Several years of low production in Madagascar continued to have a strong influence on prices and the prospects were that this situation would continue for some time.

It was reported that on December 2, 1936, the Council of State of Madagascar annulled the decree of November 19, 1932, which prohibited the exportation of vanilla beans not reaching certain lengths. The protest against the original decree was brought by the syndicate of vanilla producers, which demonstrated that the value and selling quality of vanilla were not contingent on the length of the bean.

This feature of the product has never served as a criterion of its aromatic properties in certain markets, where vanilla is always shredded and reduced to powder. The change will make more beans available for export.

Cod Liver Oil Imports Into The United States 1921-1936

(Thousands; 000 omitted)

Year	*Gal.*	*Value*	*Year*	*Gal.*	*Value*	*Year*	*Gal.*	*Value*
1921	343	$261	1926	1,921	$1,616	1931	1,737	$1,312
1922	229	158	1927	2,375	2,231	1932	1,248	804
1923	531	360	1928	2,572	2,523	1933	3,433	1,711
1924	931	631	1929	2,861	2,448	1934	3,470	2,191
1925	1,220	1,056	1930	2,895	2,229	1935	4,607	2,975
						1936	5,790	3,547

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